

EXHIBIT B

**UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
MARSHALL DIVISION**

HEADWATER RESEARCH LLC,

Plaintiff,

v.

SAMSUNG ELECTRONICS CO., LTD.,
SAMSUNG ELECTRONICS AMERICA,
INC.,

Defendants.

Civil Action No. 2:22-cv-00422-JRG-RSP

JURY DEMANDED

**SAMSUNG ELECTRONICS CO. LTD. AND SAMSUNG
ELECTRONICS AMERICA, INC.’S P.R. 3-3 AND 3-4
INVALIDITY AND PATENT INELIGIBILITY CONTENTIONS**

Defendants Samsung Electronics Co., Ltd. and Samsung Electronics America, Inc. (collectively, “Defendants” or “Samsung”) hereby provide the following Preliminary Invalidity Contentions (“Contentions”) to Plaintiff Headwater Research LLC (“Plaintiff” or “Headwater”) for U.S. Patent Nos. 9,137,701 (“the ’701 patent”), 9,271,184 (“the ’184 patent”), 9,521,578 (“the ’578 patent”), 9,277,445 (“the ’445 patent”), 11,495,224 (“the ’224 patent”), 9,143,976 (“the ’976 patent”), 9,277,433 (“the ’433 patent”), 9,609,544 (“the ’544 patent”), and 10,237,773 (“the ’773 patent”) (collectively, the “Asserted Patents”).

I. PRELIMINARY STATEMENT AND RESERVATION OF RIGHTS

In its Infringement Contentions dated February 28, 2023, Headwater asserted the following 198 claims (the “Asserted Claims”):

- Claims 1-25 of the ’701 patent;
- Claims 1-20 of the ’184 patent;
- Claims 1-22 of the ’578 patent;
- Claims 1-20, 22-26 of the ’445 patent;

Developing Software for Symbian OS	2006
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Moreover, the prior art non-patent publications listed on the face of the Asserted Patents discloses (i.e., anticipates and/or renders obvious) the elements of the Asserted Claims either explicitly or inherently, and Samsung reserves the right to rely on any such reference.

D. Prior Art Systems and/or Knowledge

The Asserted Claims are invalid under 35 U.S.C. §§ 102 and/or 103 based on prior art items offered for sale or publicly used or known or prior inventions, such as prior art products, including systems embodying any alleged inventions or structures described in, and/or any knowledge disclosed by or referred to in, any of the prior art patents or prior art publications identified above in Sections III.B and III.C. Because Samsung has not yet completed discovery in this case, Samsung reserves the right to supplement these Contentions with facts, documents, or other information learned at a later point through third-party discovery or further investigation. For example, Samsung expects to receive documents from additional third parties either through informal requests or under subpoenas that are believed to have knowledge, documentation, and/or corroborating evidence concerning some of the prior art listed above and below and/or additional prior art. These third parties include without limitation the authors, inventors, or assignees of the references listed in these Contentions. In addition, Samsung reserves the right to assert invalidity under other sections of 35 U.S.C. § 102 to the extent that discovery or further investigation yield information forming the basis for such invalidity.

Moreover, all of the systems and products listed below qualify as prior art to each of the Asserted Patents under at least pre-AIA 35 U.S.C. §§ 102(a)/(b). Such systems and products were known, used, offered for sale, and/or sold in the United States prior to the appropriate priority date corresponding to each of the Asserted Patents.

Devices
Android Devices (including HTC Dream/T-Mobile G1, Nexus One, and emulators)
Apple Devices (including iPhone, iPhone 3G, iPhone 3GS, and emulators)
Symbian Devices (including Nokia E90, N95, N97, E72, and emulators)
Windows Mobile Devices (including devices with Windows Mobile installed and emulators)
Windows XP Devices (including devices with Windows XP installed and emulators)

Operating Systems
Android including Android 1.1 (released February 2009), Android Cupcake (1.5) (released April 2009), Android Donut (1.6) (released September 2009), Android Eclair (2.0, 2.0.1, 2.1) (released October 2009 - January 2010), Android Froyo (2.2) (released May 20, 2010)
iPhone OS including iPhone OS 1.0 (released June 29, 2007), iPhone OS 2.0 (released July 11, 2008), iPhone OS 3.0 (released June 19, 2009)
Symbian OS including Symbian OS 9.1 (released 2005), Symbian OS 9.2, 9.3 (released 2006), Symbian OS 9.4 (released 2007), and associated platforms including S60 3rd Edition (released 2001/2002), S60 3rd Edition, Feature Pack 1 and Feature Pack 2, and S60 5th Edition (released October 2008)
Windows Mobile including Windows Mobile 6.1 (released April 1, 2008) and Windows Mobile 6.5 (released May 11, 2009)
Windows XP including its various editions such as Home Edition and Tablet PC Edition (Windows XP was initially released October 2001)

Applications
JuiceDefender (including JuiceDefender and associated add-on application, UltimateJuice)
GreenPower
Microsoft Applications (including Microsoft Outlook Mobile, Windows Live, and MyPhone)
Apple Applications (including Mail, Calendar, MobileMe, Backup, and Newsstand API)
Citrix Applications (including XenApp, XenDesktop, NetScaler, Citrix Receiver, Citrix Cloud Bridge)

The Federal Circuit has held that “[t]he proper test for the public use prong of the [pre-AIA] § 102(b) statutory bar is whether the purported use: (1) was accessible to the public; or (2) was commercially exploited.” *See Invitrogen Corp. v. Biocrest Mfg. L.P.*, 424 F.3d 1374, 1380 (Fed. Cir. 2005). Additionally, the on-sale bar of § 102(b) is triggered when the invention is both

Exhibits	Primary References and/or Systems
A-07, B-07, C-07, D-07, E-07, F-07, G-07, H-07, I-07	U.S. Patent Publication No. 2009/0217065A1 to Araujo, JR. (“Araujo”)
A-08, B-08, C-08, D-08, E-08, F-08, G-08, H-08, I-08	U.S. Patent No. 5,987,611 to Freund (“Freund”)
A-09, B-09, C-09, D-09, E-09, F-09, G-09, H-09, I-09	U.S. Patent No. 6,898,654 B1 to Senior et al. (“Senior”)
A-10, B-10, C-10, D-10, E-10, F-10, G-10, H-10, I-10	Android Devices
A-11, B-11, C-11, D-11, E-11, F-11, G-11, H-11, I-11	Mobile Devices: Symbian Devices, Apple Devices, Microsoft Mobile Devices, Microsoft XP Devices

Specifically, Samsung contends that at least the references and/or systems in the table above independently anticipate the Asserted Claims under 35 U.S.C. §§ 102(a), (b), (e), (f) and/or (g), as set forth in the charts attached as:

- Exhibits A-01 through Exhibits A-11 for the asserted claims of the ’701 patent;
- Exhibits B-01 through Exhibits B-11 for the asserted claims of the ’184 patent;
- Exhibits C-01 through Exhibits C-11 for the asserted claims of the ’578 patent;
- Exhibits D-01 through Exhibits D-11 for the asserted claims of the ’445 patent;
- Exhibits E-01 through Exhibits E-11 for the asserted claims of the ’224 patent;
- Exhibits F-01 through Exhibits F-11 for the asserted claims of the ’976 patent;
- Exhibits G-01 through Exhibits G-11 for the asserted claims of the ’433 patent;
- Exhibits H-01 through Exhibits H-11 for the asserted claims of the ’544 patent; and
- Exhibits I-01 through Exhibits I-11 for the asserted claims of the ’773 patent.

- Exhibit I-01 through Exhibit I-11 and Exhibit I-I for the asserted claims of the '773 patent.

Moreover, each prior art reference or system may be combined with (1) information known to persons skilled in the art at the time of the alleged invention; (2) any other anticipatory prior art references or systems; and (3) any of the additional prior art identified above or in the prosecution of the Asserted Patents and related applications.

Below are examples of prior art references and/or systems that would have been combined by one of ordinary skill in the art at the time of the alleged invention. These combinations are merely examples. The Asserted Claims are rendered obvious by:

- Cole alone or in combination with one or more of Oestvall, Montemurro, Rao, Kelz, Scahill, Wyld, Van Megen, Maes, Vals, Araujo, Freund, Malomsoky, D'Amore, Lee, Brisebois, Aleksic, and Senior;
- Oestvall alone or in combination with one or more of Cole, Montemurro, Rao, Kelz, Scahill, Wyld, Van Megen, Maes, Vals, Araujo, Freund, Malomsoky, D'Amore, Lee, Brisebois, Aleksic, and Senior;
- Rao alone or in combination with one or more of Cole, Oestvall, Montemurro, Kelz, Scahill, Wyld, Van Megen, Maes, Vals, Araujo, Freund, Malomsoky, D'Amore, Lee, Brisebois, Aleksic, and Senior;
- Kelz alone or in combination with one or more of Cole, Oestvall, Montemurro, Rao, Scahill, Wyld, Van Megen, Maes, Vals, Araujo, Freund, Malomsoky, D'Amore, Lee, Brisebois, Aleksic, and Senior;
- Scahill alone or in combination with one or more of Cole, Oestvall, Montemurro, Rao, Kelz, Wyld, Van Megen, Maes, Vals, Araujo, Freund, Malomsoky, D'Amore, Lee, Brisebois, Aleksic, and Senior;
- Wyld alone or in combination with one or more of Cole, Oestvall, Montemurro, Rao, Kelz, Scahill, Van Megen, Maes, Vals, Araujo, Freund, Malomsoky, D'Amore, Lee, Brisebois, Aleksic, and Senior;
- Araujo alone or in combination with one or more of Cole, Oestvall, Montemurro, Rao, Kelz, Scahill, Wyld, Van Megen, Maes, Vals, Freund, Malomsoky, D'Amore, Lee, Brisebois, Aleksic, and Senior;
- Freund alone or in combination with one or more of Cole, Oestvall, Montemurro, Rao, Kelz, Scahill, Wyld, Van Megen, Maes, Vals, Araujo, Malomsoky, D'Amore, Lee, Brisebois, Aleksic, and Senior;

- Senior alone or in combination with one or more of Cole, Oestvall, Montemurro, Rao, Kelz, Scahill, Wyld, Van Megen, Maes, Vals, Araujo, Malomsoky, D'Amore, Lee, Brisebois, Aleksic, and Freund;
- **Android Devices (including operating systems and applications running therein)** with one or more applications alone or in combination with one or more of Cole, Oestvall, Montemurro, Rao, Kelz, Scahill, Wyld, Van Megen, Maes, Vals, Araujo, Freund, Malomsoky, D'Amore, Lee, Brisebois, Aleksic, and Senior;
- Apple Devices (including operating systems and applications running therein) with one or more applications alone or in combination with one or more of Cole, Oestvall, Montemurro, Rao, Kelz, Scahill, Wyld, Van Megen, Maes, Vals, Araujo, Freund, Malomsoky, D'Amore, Lee, Brisebois, Aleksic, and Senior;
- Symbian Devices (including operating systems and applications running therein) alone or in combination with one or more of Cole, Oestvall, Montemurro, Rao, Kelz, Scahill, Wyld, Van Megen, Maes, Vals, Araujo, Freund, Malomsoky, D'Amore, Lee, Brisebois, Aleksic, and Senior;
- Windows Mobile Devices (including operating systems and applications running therein) alone or in combination with one or more of Cole, Oestvall, Montemurro, Rao, Kelz, Scahill, Wyld, Van Megen, Maes, Vals, Araujo, Freund, Malomsoky, D'Amore, Lee, Brisebois, Aleksic, and Senior;
- Windows XP Devices (including operating systems and applications running therein) alone or in combination with one or more of Cole, Oestvall, Montemurro, Rao, Kelz, Scahill, Wyld, Van Megen, Maes, Vals, Araujo, Freund, Malomsoky, D'Amore, Lee, Brisebois, Aleksic, and Senior; and
- Any combination of one or more of **Android Devices**, Apple Devices, Symbian Devices, Windows Mobile Devices, and Windows XP Devices, **including the operating systems and applications running therein.**

2. Exemplary Motivations to Combine

To the extent a finder of fact finds that any primary prior art reference does not disclose one or more limitations of an asserted claim, the asserted claim is nevertheless obvious because the allegedly missing limitations contain nothing beyond ordinary improvements. In other words, the asserted claim combines known elements to achieve predictable results or chooses between clear alternatives known to those of skill in the art, particularly in view of the state of the art as reflected in the relevant prior art.

Exhibit A-10 to Defendants' Invalidity Contentions
U.S. Patent No. 9,137,701

Exhibit A-10

Based on Headwater's apparent positions as to the scope of the patent's claims, as best they can be deciphered, the reference(s) charted below anticipate(s) or at least render(s) obvious the identified claims. The portions of the prior art reference cited below are not exhaustive but are exemplary in nature.

This disclosure is not an admission that Samsung concedes any claim construction implied or suggested by Headwater's apparent positions as to the scope of the patent's claims, nor is it an admission by Samsung that any of its products are covered by or infringe the patent's claims, particularly when they are properly construed and applied. Samsung is not taking any claim construction positions through this disclosure, including whether the preamble is a limitation.

Samsung reserves the right to rely on additional citations or sources of evidence that also may be applicable, or that may become applicable in light of claim construction, changes in Headwater's infringement contentions, and/or information obtained during discovery as the case progresses. Samsung further reserves the right to amend or supplement this claim chart at a later date as more fully set forth in the Invalidity Contentions. For example, Defendants are currently in the process of taking discovery from non-parties including Nokia, HMD, Citrix, Google, Apple, and Microsoft. Accordingly, Defendants reserve the right to modify, amend, and/or supplement these contentions as information becomes available from non-parties.

Android is mobile device operating system that was initially released in September 2008. Applications (or "apps") can be installed on mobile devices that run Android. Any mobile device that predates the '701 patent, running an Android version with one or more apps that also predate the '701 patent, qualifies as prior art under at least pre-AIA 35 U.S.C. §§ 102(a)/(b). Such a device was known, used, offered for sale, and/or sold in the United States before the '701 patent.

Exemplary mobile devices that predate the '701 patent include:

- HTC Dream/T-Mobile G1 (released September 2008)
- Nexus One (released January 2010)

Exemplary Android versions that predate the '701 patent include:¹

¹ See, e.g., SAMSUNG_PRIORART0003998; SAMSUNG_PRIORART0004085; SAMSUNG_PRIORART0004081; SAMSUNG_PRIORART0004086; SAMSUNG_PRIORART0004083; SAMSUNG_PRIORART0004084.

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- Android 1.0 (released September 2008)
- Android 1.1 (released February 2009)
- Android Cupcake (1.5) (released April 2009)
- Android Donut (1.6) (released September 2009)
- Android Eclair (2.0, 2.0.1, 2.1) (released October 2009 - January 2010)
- Android Froyo (2.2) (released May 20, 2010)

Exemplary apps that predate the '701 patent include:²

- JuiceDefender (released January 2010) and its associated add-on application, UltimateJuice (collectively "JuiceDefender App")
- GreenPower (released March 2010)

As a specific example, a Nexus One mobile device running Android Froyo 2.2 with the JuiceDefender application installed qualifies as prior art under at least pre-AIA 35 U.S.C. §§ 102(a)/(b). This device was known, used, offered for sale, and/or sold in the United States on or before May 20, 2010. At least the various documents cited in this claim chart describe the functionality of this device.

To the extent it is argued that Android Device with One or More Apps does not disclose or include each and every asserted claim limitation, either expressly or inherently, it would have been obvious to a POSITA to incorporate any of the teachings from the references identified in Exhibits A-01 through A-11, and A-A (whose exemplary citations for each limitation are incorporated herein) into Android Device with One or More Apps. Indeed, it would have been obvious to make such combinations and a POSITA would have had reason and motivation to make such combinations at least for reasons described herein and in the cover pleading.

'701 Claims	Android Device with One or More Apps
[1 pre] A wireless end-user device, comprising:	To the extent the preamble is a limitation, Android Device with One or More Apps discloses and/or renders obvious this element. For example, see the following passages and/or figures, as well as related disclosures:

² See, e.g., SAMSUNG_PRIORART0000335-SAMSUNG_PRIORART0000383; POUZERATE0000001-POUZERATE0000261.

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'701 Claims	Android Device with One or More Apps
	<p><u>Nexus One</u> The Nexus One is an example of an Android smartphone.</p> <p><i>See, e.g., SAMSUNG_PRIORART0000001 (Nexus) at 17:</i></p> <div> <p style="text-align: center;">Getting to know your phone</p> <p>The diagram illustrates the features of the Nexus One smartphone. The front view shows the Power button, Proximity & light sensors, Status light, Earpiece, Touchscreen, Soft buttons, and Trackball. The side view shows the 3.5mm headphone jack, 5-megapixel camera with autofocus, LED camera flash, Noise-cancellation microphone, Volume up/down button, and Speaker. The back view shows the Back cover. The bottom view shows the Dock connectors (for optional dock accessories), USB port, and Microphone.</p> </div> <p><u>JuiceDefender App</u></p> <p>JuiceDefender is a mobile application (or “app”) intended to run on a mobile device, such as an Android smartphone. The Nexus One is an example of an Android smartphone capable of running JuiceDefender.</p> <p>SAMSUNG_PRIORART0000379 (Latedroid) (“JuiceDefender saves battery power (lots of it!) by controlling the device data connection and/or WiFi ... You can schedule regular APN/WiFi</p>

Exhibit A-10 to Defendants' Invalidity Contentions
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'701 Claims	Android Device with One or More Apps
	<p>activation to let background data sync occur and have APN/WiFi enabled while the screen is on. It also helps in minimizing distractions.”)</p> <p>SAMSUNG_PRIORART0000361 (Purdy) (“Android: Most phones don't make it easy to switch cellular data connection on and off, even if doing so really helps save your battery. JuiceDefender toggles wireless data and Wi-Fi on and off every so often to preserve power.”)</p> <p><u>GreenPower App</u></p> <p><u>GreenPower is a mobile application (or “app”) intended to run on a mobile device, such an Android smartphone. The Nexus One is an example of an Android smartphone capable of running GreenPower.</u></p> <p><i>See, e.g.,</i> POUZERATE0000015 (GDG Oslo) at 5:</p>

Exhibit A-10 to Defendants' Invalidity Contentions
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'701 Claims	Android Device with One or More Apps
	<div><h2>Background</h2><div><div></div><div></div></div><ul style="list-style-type: none">History of GreenPower app<ul style="list-style-type: none">2010: My first HTC heroMarch 2010: First Free version publishedOctober 2010: First Paid version publishedJan 2013:<ul style="list-style-type: none">1.3M downloads Free (>2500/day)200.000 active users<div><p>23.01.2013 - GDG Oslo - 5/35</p></div><p><i>See, e.g.,</i> POUZERATE0000002 (App Circus) at 9:</p></div>

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'701 Claims	Android Device with One or More Apps
	<p>Be mainstream</p> <ul style="list-style-type: none"> ▶ Cross Android versions <ul style="list-style-type: none"> ◦ Froyo ◦ Gingerbread ◦ Honeycomb ◦ Ice cream sandwich (as soon as someone offers me a Galaxy Nexus) ▶ Cross technologies <ul style="list-style-type: none"> ◦ GSM ◦ CDMA ◦ 2G, 3G, LTE ▶ 18 languages (not everybody speaks English, I know, I'm French) 
<p>[1a] a wireless wide area network (WWAN) modem to communicate data for Internet service activities between the device and at least one WWAN, when configured for and connected to the WWAN;</p>	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><u>Nexus One</u></p> <p><i>See, e.g., SAMSUNG_PRIORART0000001 (Nexus) at 332:</i></p>

Exhibit A-10 to Defendants' Invalidity Contentions
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'701 Claims	Android Device with One or More Apps		
	<table border="1"> <tr> <td>Cellular & wireless</td><td> <p>Nexus One GSM phones compatible with 3G mobile networks from AT&T (U.S.) and Rogers Wireless (Canada): 3G UMTS bands I/II/V: 2100, 1900, 850 MHz</p> <p>Nexus One GSM phones compatible with 3G mobile networks from T-Mobile (U.S.): 3G UMTS bands I/IV/VIII: 2100, 1700(AWS), 900 MHz</p> <p>All Nexus One GSM phones: HSDPA 7.2Mbps HSUPA 2Mbps GSM/EDGE 850, 900, 1800, 1900 MHz Wi-Fi 802.11b/g Bluetooth 2.1 + EDR A2DP stereo Bluetooth</p> </td></tr> </table> <p><u>JuiceDefender App</u></p> <p>SAMSUNG_PRIORART0000379 (Latedroid) (“JuiceDefender saves battery power (lots of it!) by controlling the device data connection and/or WiFi ... You can schedule regular APN/WiFi activation to let background data sync occur and have APN/WiFi enabled while the screen is on. It also helps in minimizing distractions.”).</p> <p>SAMSUNG_PRIORART0000351 (Configuration-Translated) (“APN: activates / deactivates the APN connection, in its submenu we find the MMS button that activated configures the reception of MMS in the same way that we have the APN and Prefer Wifi that activated will try to connect first to this and if to five seconds does not find an available network will activate the APN. WIFI: activates / deactivates the WIFI connection, in its submenu we find the following buttons, Auto Disable turns off the wifi in the case of not finding a network available to save battery, in case it is deactivated we will have to activate it manually; Enable on Schedule / Peak / Screen will activate the wifi as we have configured those buttons that we will see below.”)</p>	Cellular & wireless	<p>Nexus One GSM phones compatible with 3G mobile networks from AT&T (U.S.) and Rogers Wireless (Canada): 3G UMTS bands I/II/V: 2100, 1900, 850 MHz</p> <p>Nexus One GSM phones compatible with 3G mobile networks from T-Mobile (U.S.): 3G UMTS bands I/IV/VIII: 2100, 1700(AWS), 900 MHz</p> <p>All Nexus One GSM phones: HSDPA 7.2Mbps HSUPA 2Mbps GSM/EDGE 850, 900, 1800, 1900 MHz Wi-Fi 802.11b/g Bluetooth 2.1 + EDR A2DP stereo Bluetooth</p>
Cellular & wireless	<p>Nexus One GSM phones compatible with 3G mobile networks from AT&T (U.S.) and Rogers Wireless (Canada): 3G UMTS bands I/II/V: 2100, 1900, 850 MHz</p> <p>Nexus One GSM phones compatible with 3G mobile networks from T-Mobile (U.S.): 3G UMTS bands I/IV/VIII: 2100, 1700(AWS), 900 MHz</p> <p>All Nexus One GSM phones: HSDPA 7.2Mbps HSUPA 2Mbps GSM/EDGE 850, 900, 1800, 1900 MHz Wi-Fi 802.11b/g Bluetooth 2.1 + EDR A2DP stereo Bluetooth</p>		

Exhibit A-10 to Defendants' Invalidity Contentions
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'701 Claims	Android Device with One or More Apps
	<p>SAMSUNG_PRIORART0000361 (Purdy) ("Android: Most phones don't make it easy to switch cellular data connection on and off, even if doing so really helps save your battery. JuiceDefender toggles wireless data and Wi-Fi on and off every so often to preserve power.").</p> <p>SAMSUNG_PRIORART0000335 (Ruddock) ("Juice Defender is a battery conservation app. It uses various triggers, rules, and timers to control how often your device utilizes 3G/EDGE APN's (data connections) as well as WiFi. These data connections are the number one drainers of battery life when your phone is idle, so Juice Defender allows you to decide when, where, and how often you want them to be active.").</p> <p><u>GreenPower App</u></p> <p>POUZERATE0000196 (GreenPower User Guide) ("Manage Mobile Network If this setting is selected, then Green Power will regularly turn on and off the Mobile Network connection, based on the durations specified in the settings below.</p> <p>If this setting is not selected, then Green Power will leave the Mobile Network as it is, never turning it on or off.</p> <p>Please note that in order for Green Power to turn on / off Mobile Network, this one has to be manually enabled by the user first in the phone settings (Wireless & networks → Mobile Network) or in Green Power settings (Global wireless settings → Mobile Network) . Green Power can't itself turn on Mobile Network as this is a limitation of the Android system for security and cost reasons.").</p>
[1b] a wireless local area network (WLAN) modem to communicate data for Internet	Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:

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'701 Claims	Android Device with One or More Apps		
<p>service activities between the device and at least one WLAN, when configured for and connected to the WLAN;</p>	<p><i>See, e.g.</i>, the disclosures identified for claims [1 pre] – [1a].</p> <p><u>GreenPower App</u></p> <p>POUZERATE0000196 (GreenPower User Guide) (“Manage Wifi If this setting is selected, then Green Power will regularly turn on and off the Wifi connection, based on the durations specified in the settings below.</p> <p>If this setting is not selected, then Green Power will leave the Wifi as it is, never turning it on or off.</p> <p>Please note that if you manually switches off the Wifi, then Green Power will unselect the “Manage Wifi” setting in order not to automatically switch on the Wifi again despite your manual action. Then, if you switch back on the Wifi or reselect “Manage Wifi” setting, Green Power will resume managing Wifi connection.”).</p>		
<p>[1c] one or more processors configured to</p>	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g.</i>, SAMSUNG_PRIORART0000001 (Nexus) at 331:</p> <table border="1"> <tr> <td>Processor</td><td>Qualcomm QSD 8250, 1 GHz</td></tr> </table> <p><i>See, e.g.</i>, SAMSUNG_PRIORART0000001 (Nexus) at 320:</p>	Processor	Qualcomm QSD 8250, 1 GHz
Processor	Qualcomm QSD 8250, 1 GHz		

Exhibit A-10 to Defendants' Invalidity Contentions
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'701 Claims	Android Device with One or More Apps
	<p>Accounts & sync settings screen</p> <p>Background data Check to permit applications to synchronize data in the background, whether or not you are actively working in them. Unchecking this setting can save battery power and lowers (but does not eliminate) data use.</p> <p>Auto-sync Check to permit applications to synchronize data on their own schedule. If you uncheck this setting, you must touch an account in the list on this screen, press Menu ☰, and touch Sync now to synchronize data for that account. Synchronizing data automatically is disabled if Background data is unchecked. In that case, the Auto-sync checkbox is dimmed.</p> <p>SAMSUNG_PRIORART0000001 (Nexus) at 115-116 (“You can configure background data use and synchronization options for all of the applications on your phone. You can also configure what kinds of data you synchronize for each account. Some applications, such as Gmail and Calendar, have their own synchronization settings.”).</p> <p>SAMSUNG_PRIORART0000001 (Nexus) at 115-116:</p>

Exhibit A-10 to Defendants' Invalidity Contentions
U.S. Patent No. 9,137,701

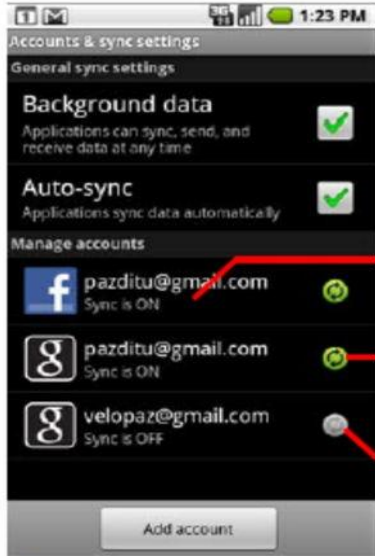


'701 Claims	Android Device with One or More Apps
	<p>The screen displays your current sync settings and a list of your current accounts.</p>  <p>Touch the account to configure.</p> <p>Some or all information from this account is configured to sync automatically with your phone.</p> <p>No information from this account syncs automatically with your phone.</p> <p> indicates that some or all of an account's information is configured to sync automatically with your phone.</p> <p> indicates that none of an account's information is configured to sync automatically with your phone.</p>
<p>[1d] determine, for a first end-user application capable of running in a background state and capable of running as a foreground application,</p>	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><u>Nexus One</u></p>

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’701 Claims	Android Device with One or More Apps
<p>whether the application is running in a background state or as a foreground application, and control, via an application program interface (API), application access for Internet service activities provided through the WWAN modem and the WLAN modem, to, based on a first differential traffic control policy, selectively block and allow access by the first end-user application to the WWAN modem at a time when data for Internet service activities is communicated through a WWAN modem connection to the at least one WWAN,</p>	<p><i>See, e.g., SAMSUNG_PRIORART0000001 (Nexus) at 320:</i></p> <p>Accounts & sync settings screen</p> <p>Background data Check to permit applications to synchronize data in the background, whether or not you are actively working in them. Unchecking this setting can save battery power and lowers (but does not eliminate) data use.</p> <p>Auto-sync Check to permit applications to synchronize data on their own schedule. If you uncheck this setting, you must touch an account in the list on this screen, press Menu ≡, and touch Sync now to synchronize data for that account. Synchronizing data automatically is disabled if Background data is unchecked. In that case, the Auto-sync checkbox is dimmed.</p> <p>SAMSUNG_PRIORART0000001 (Nexus) at 115-116 (“You can configure background data use and synchronization options for all of the applications on your phone. You can also configure what kinds of data you synchronize for each account. Some applications, such as Gmail and Calendar, have their own synchronization settings.”).</p> <p>SAMSUNG_PRIORART0000001 (Nexus) at 115-116:</p>

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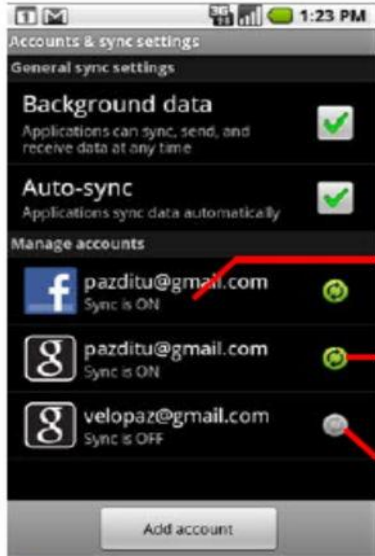


'701 Claims	Android Device with One or More Apps
	<p>The screen displays your current sync settings and a list of your current accounts.</p>  <p>Touch the account to configure.</p> <p>Some or all information from this account is configured to sync automatically with your phone.</p> <p>No information from this account syncs automatically with your phone.</p> <p> indicates that some or all of an account's information is configured to sync automatically with your phone.</p> <p> indicates that none of an account's information is configured to sync automatically with your phone.</p> <p><u>JuiceDefender App</u></p> <p>SAMSUNG_PRIORART0000379 (Latedroid):</p>

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'701 Claims	Android Device with One or More Apps
	<div> <h2>JuiceDefender</h2> </div> <div> </div> <div> <p>JuiceDefender features to your liking.</p> </div> <div> <p>JuiceDefender saves battery power (<i>lots of it!</i>) by controlling the device data connection and/or WiFi.</p> </div> <div> <p>You can schedule regular APN/WiFi activation to let background data sync occur and have APN/WiFi enabled while the screen is on. It also helps in minimizing distractions ;)</p> </div> <div> </div> <div> <p>The <i>Easy Mode</i> is a no-fuss one-click way to let your battery last longer - much longer. Just enable JuiceDefender by clicking on the big button and you're ready to go!</p> </div> <div> <p>If you want more fine-grained control, try <i>Advanced Mode</i>, where you can configure all</p> </div>

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'701 Claims	Android Device with One or More Apps
	<p>There are 5 <i>triggers</i> for the enable/disable behaviour:</p> <p>Battery - when battery level gets low (less than 15%), disable APN/WiFi, and re-enable them when battery level is restored. APN/WiFi will also be enabled while the device is being recharged.</p> <p>Schedule - regularly enable APN/WiFi for a short period of time, to <i>let background data sync</i> occur (email, Twitter, Facebook, stock quotes...). If <i>Quick</i> is disabled APN/WiFi stays enabled for a longer period, useful if your data connection is very slow or you need to sync lots of data.</p> <p>Night schedule (requires <i>UltimateJuice</i>) - disable APN/WiFi during night time; you can also optionally put the phone in Silent Mode.</p> <p>Screen - enable APN/WiFi <i>while the screen is on</i> to allow browsing, tweeting, procrastination and general internet-powered enjoyment, regardless of scheduled events and battery level.</p> <p>Location (requires <i>UltimateJuice</i>) - this trigger controlled by the 'AutoWiFi' button. It disables WiFi when the device is not in range of any known WiFi network. The location is determined via the cellular network, so it's usually quite coarse. It's a fully automatic set-it-and-forget-it WiFi manager!</p> <p>The <i>priority order</i> of the triggers is 1) location (WiFi only), 2) screen, 3) battery, 4) night schedule, 5) schedule - this means, for example, that when the screen is on APN/WiFi will be enabled even when the battery is low, or that the regular schedule won't occur during the night period.</p> <p>SAMSUNG_PRIORART0000361 (Purdy):</p>

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'701 Claims	Android Device with One or More Apps
	<div> </div> <p>Android: Most phones don't make it easy to switch cellular data connection on and off, even if doing so really helps save your battery. JuiceDefender toggles wireless data and Wi-Fi on and off every so often to preserve power.</p> <p>The whole point of a smartphone with Google apps baked in is constant connectivity, of course, and you don't want to shut off access to your email, Google Voice messages, and other online services. But when you're walking around, at your office desk, and generally not actively using your phone, you probably don't need your phone to check in every minute with the mothership. JuiceDefender lets you set a time interval—5 minutes, 15, 30, an hour, two hours—at which its background process will re-enable your carrier APN, see if there are new messages or data coming in, and then shut off again. You can also set similar Wi-Fi connectivity rules, or only have web data enabled when you've got your screen on. Besides the battery savings, those who like to parse out their email checks and avoid minute-by-minute distractions see some benefit here, too.</p> <p>SAMSUNG_PRIORART0000379 (Latedroid):</p>

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'701 Claims	Android Device with One or More Apps
	<div><p>The screenshot displays the 'Juice Control' app interface. At the top, there's a title 'Juice Control'. Below it, a row of five green buttons: 'Enabled', '3G APN', 'MMS', 'WiFi', and 'AutoWiFi'. Underneath is a 'Triggers' section with four green buttons: 'Screen', 'Battery', 'Schedule', and 'Night'. Below these are four lines of text: 'Location: Disable WiFi when far from known networks', 'Screen: Enable APN+WiFi when screen on', 'Battery: Disable APN+WiFi when battery low', and 'Night: Disable APN+WiFi from 22:00 to 06:00'. A horizontal slider is positioned below the text. At the bottom, there's a 'Schedule' section with the text 'Enable APN+WiFi 1m every 5m' and a row of buttons: '5m', '15m', '30m', '1h', '2h', and a 'Quick' button with a red circular arrow icon.</p></div> <p>SAMSUNG_PRIORART0000361 (Purdy):</p>

Exhibit A-10 to Defendants' Invalidation Contentions
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'701 Claims	Android Device with One or More Apps
	<div><p>The screenshot displays the 'Juice Control' app interface. At the top, there's a title 'Juice Control' and a row of five green buttons: 'Enabled', '3G APN', 'MMS', 'WiFi', and 'AutoWiFi'. Below this is a 'Triggers' section with four green buttons: 'Screen', 'Battery', 'Schedule', and 'Night'. Underneath the triggers, there are four lines of text: 'Location Disable WiFi when far from known networks', 'Screen Enable APN+MMS when screen on', 'Battery Disable APN+MMS when battery low', and 'Night Disable APN+MMS from 10pm to 6:30am'. Below the text is a horizontal slider bar with a yellow segment on the left and a grey segment on the right, followed by a 'Sil' button. At the bottom, there's a 'Schedule' section with the text 'Enable APN+MMS 2m every 15m' and a row of buttons: '5m', '15m' (highlighted), '30m', '1h', '2h', and a 'Quick' button.</p></div> <p>SAMSUNG_PRIORART0000351 (Configuration-Translated):</p>

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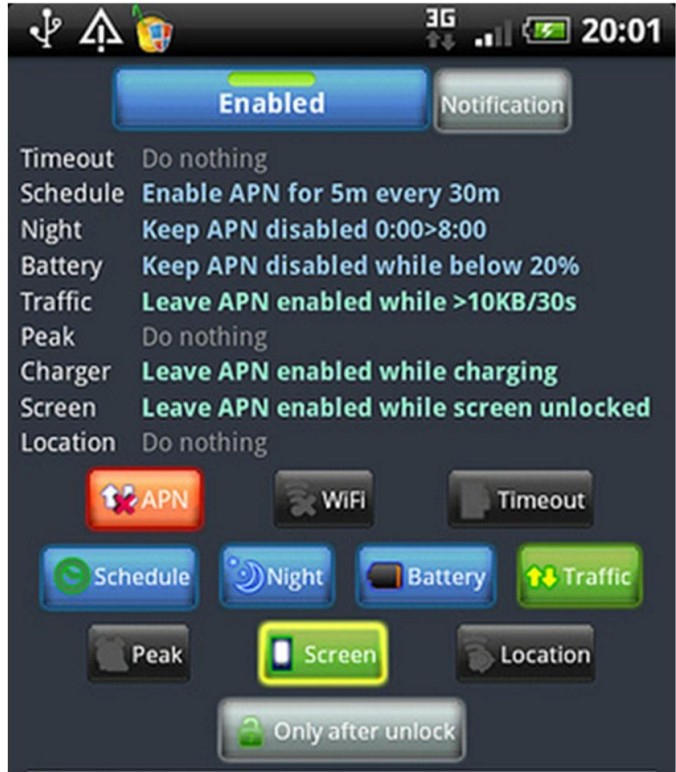
'701 Claims	Android Device with One or More Apps
	<div></div> <p>HW_PRIOR_ART00002319 (Ruddock):</p>

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'701 Claims	Android Device with One or More Apps
	<div> </div> <p><u>GreenPower App</u></p> <p>POUZERATE0000196 (GreenPower User Guide) ("Manage Wifi</p>

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'701 Claims	Android Device with One or More Apps
	<p>If this setting is selected, then Green Power will regularly turn on and off the Wifi connection, based on the durations specified in the settings below.</p> <p>If this setting is not selected, then Green Power will leave the Wifi as it is, never turning it on or off.</p> <p>Please note that if you manually switches off the Wifi, then Green Power will unselect the "Manage Wifi" setting in order not to automatically switch on the Wifi again despite your manual action. Then, if you switch back on the Wifi or reselect "Manage Wifi" setting, Green Power will resume managing Wifi connection.</p> <p>Manage Mobile Network If this setting is selected, then Green Power will regularly turn on and off the Mobile Network connection, based on the durations specified in the settings below.</p> <p>If this setting is not selected, then Green Power will leave the Mobile Network as it is, never turning it on or off.</p> <p>Please note that in order for Green Power to turn on / off Mobile Network, this one has to be manually enabled by the user first in the phone settings (Wireless & networks → Mobile Network) or in Green Power settings (Global wireless settings → Mobile Network) . Green Power can't itself turn on Mobile Network as this is a limitation of the Android system for security and cost reasons.").</p>
[1e] wherein the access is selectively blocked based on a determination that the first end-user application is running in a background state, and wherein the access is	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g.,</i> the disclosures identified for claims [1d].</p>

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

'701 Claims	Android Device with One or More Apps
selectively allowed based on a determination that the first end-user application is running as a foreground application.	<p><u>Nexus One</u></p> <p><i>See, e.g., SAMSUNG_PRIORART0000001 (Nexus) at 115-117:</i></p> <p>Configuring account sync and display options</p> <p>You can configure background data use and synchronization options for all of the applications on your phone. You can also configure what kinds of data you synchronize for each account. Some applications, such as Gmail and Calendar, have their own synchronization settings.</p> <p>Some applications, such as Contacts and Gmail, can sync data from multiple applications. Others, such as Calendar, sync data only from the first Google Account you sign into on your phone, or from an account associated specifically with that application.</p> <p>For some accounts, syncing is two-directional; changes that you make to the information on your phone are made to the copy of that information on the web. Your Google Account works this way. Other accounts support only one-way sync; the information on your phone is read-only.</p> <p>You can use the Contacts display options to configure the kinds of contacts that are displayed, as described in "Changing which contacts are displayed" on page 106.</p> <p>To configure general sync settings</p> <p>1 Open the Accounts & Sync Settings screen. You can do this in Contacts by pressing Menu  and touching Accounts, or directly in the Settings application (press Home , press Menu , and touch Settings).</p>

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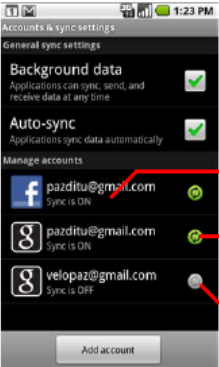


'701 Claims	Android Device with One or More Apps
	<p>The screen displays your current sync settings and a list of your current accounts.</p>  <p>Touch the account to configure.</p> <p>Some or all information from this account is configured to sync automatically with your phone.</p> <p>No information from this account syncs automatically with your phone.</p> <p> indicates that some or all of an account's information is configured to sync automatically with your phone.</p> <p> indicates that none of an account's information is configured to sync automatically with your phone.</p> <p>2 Check or uncheck Background data to control whether applications and services can transmit data when you are not working with them directly (that is, when they are running in the background).</p> <p>If you uncheck this option, Gmail stops receiving new mail, Calendar stops syncing events, and so on, until you touch the Refresh menu item or send an email.</p> <p>3 Check or uncheck Auto-sync to control whether changes you make to information on the phone or on the web are automatically synced with each other.</p> <p>For example, when this option is checked, changes that you make in Contacts on the phone are automatically made in Google Contacts on the web.</p> <p>If you uncheck this option, you may be able to use an application's tools to sync data manually. See "To sync information manually" on page 117.</p>

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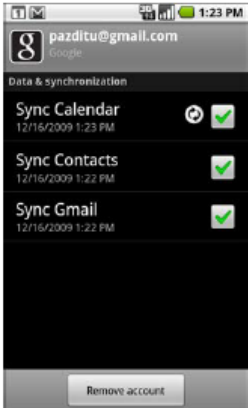
'701 Claims	Android Device with One or More Apps
	<p>To sync information manually</p> <ol style="list-style-type: none"> 1 Open the Accounts & Sync Settings screen. 2 Touch the account whose data you want to sync. 3 Press Menu  and touch Sync now. <p>To change an account's sync settings</p> <ol style="list-style-type: none"> 1 Open the Accounts & Sync Settings screen. 2 Touch the account whose sync settings you want to change. <p>The Data and Synchronization screen opens, displaying a list of the kinds of information the account can sync.</p> <p>Checked items are configured to sync to your phone.</p>  <ol style="list-style-type: none"> 3 Check or uncheck the kinds of information you want to sync to the phone. <p>Unchecking an option does not remove the information from your phone; it simply stops it from syncing automatically. To remove the information previously synced for the account, you must remove the account.</p> <p><i>See, e.g., SAMSUNG_PRIORART0000001 (Nexus) at 218:</i></p>

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
'701 Claims	Android Device with One or More Apps
	<p>Open in background Check to open new windows in the background when you touch & hold a link and touch Open in new window. This is useful when you are working with windows that take a long time to download and display. Press Menu , touch Windows, and then touch the new window to view it. Uncheck if you prefer new windows that you open in this way to open in place of the current window. See "To switch Browser windows" on page 213.</p> <p>Set home page Opens a dialog where you can enter the URL of a page that you want to open whenever you open a new Browser window. If you prefer to open new Browser windows more quickly, by not opening any page by default, leave the dialog blank.</p> <p><i>See, e.g., SAMSUNG_PRIORART0000001 (Nexus) at 286:</i></p> <p>Refresh settings</p> <p>These settings control how frequently the information on the News & Weather widget is updated. In addition to using these settings, adding or removing the News & Weather widget from the Home screen also turns Auto-refresh on or off. For more about working with widgets, see "Customizing the Home screen" on page 58.</p> <p>Auto-refresh Check to have News & Weather update information automatically, at the frequency you set with Refresh interval. Uncheck to update the news and weather only when you press Menu  and touch Refresh. For automatic refresh to work, you must also have Background Data turned on in the Settings application. See "Accounts & sync settings" on page 320.</p> <p><i>See, e.g., SAMSUNG_PRIORART0000001 (Nexus) at 320:</i></p>

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
'701 Claims	Android Device with One or More Apps
	<p>Accounts & sync settings</p> <p>Use the Accounts & Sync settings to add, remove, and manage your Google and other supported accounts. You also use these settings to control how and whether all applications send, receive, and sync data on their own schedules, and whether all applications can synchronize user data automatically.</p> <p>Gmail, Calendar, and other applications may also have their own settings to control how they synchronize data; see the sections on those applications for details.</p> <p>Accounts & sync settings screen</p> <p>Background data Check to permit applications to synchronize data in the background, whether or not you are actively working in them. Unchecking this setting can save battery power and lowers (but does not eliminate) data use.</p> <p>Auto-sync Check to permit applications to synchronize data on their own schedule. If you uncheck this setting, you must touch an account in the list on this screen, press Menu , and touch Sync now to synchronize data for that account. Synchronizing data automatically is disabled if Background data is unchecked. In that case, the Auto-sync checkbox is dimmed.</p> <p>Manage accounts The rest of this screen lists the Google Accounts and other accounts you've added to the phone. Adding accounts is described in "Accounts" on page 111.</p> <p>If you touch an account in this screen, its account screen opens.</p> <p><u>JuiceDefender App</u></p> <p>SAMSUNG_PRIORART0000379 (Latedroid):</p>

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'701 Claims	Android Device with One or More Apps
	<div> <h2>JuiceDefender</h2> </div> <div> </div> <div> <p>JuiceDefender features to your liking.</p> </div> <div> <p>JuiceDefender saves battery power (<i>lots of it!</i>) by controlling the device data connection and/or WiFi.</p> </div> <div> <p>You can schedule regular APN/WiFi activation to let background data sync occur and have APN/WiFi enabled while the screen is on. It also helps in minimizing distractions ;)</p> </div> <div> </div> <div> <p>The <i>Easy Mode</i> is a no-fuss one-click way to let your battery last longer - much longer. Just enable JuiceDefender by clicking on the big button and you're ready to go!</p> </div> <div> <p>If you want more fine-grained control, try <i>Advanced Mode</i>, where you can configure all</p> </div>

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'701 Claims	Android Device with One or More Apps
	<p>There are 5 <i>triggers</i> for the enable/disable behaviour:</p> <p>Battery - when battery level gets low (less than 15%), disable APN/WiFi, and re-enable them when battery level is restored. APN/WiFi will also be enabled while the device is being recharged.</p> <p>Schedule - regularly enable APN/WiFi for a short period of time, to <i>let background data sync</i> occur (email, Twitter, Facebook, stock quotes...). If <i>Quick</i> is disabled APN/WiFi stays enabled for a longer period, useful if your data connection is very slow or you need to sync lots of data.</p> <p>Night schedule (requires <i>UltimateJuice</i>) - disable APN/WiFi during night time; you can also optionally put the phone in Silent Mode.</p> <p>Screen - enable APN/WiFi <i>while the screen is on</i> to allow browsing, tweeting, procrastination and general internet-powered enjoyment, regardless of scheduled events and battery level.</p> <p>Location (requires <i>UltimateJuice</i>) - this trigger controlled by the '<i>AutoWiFi</i>' button. It disables WiFi when the device is not in range of any known WiFi network. The location is determined via the cellular network, so it's usually quite coarse. It's a fully automatic set-it-and-forget-it WiFi manager!</p> <p>The <i>priority order</i> of the triggers is 1) location (WiFi only), 2) screen, 3) battery, 4) night schedule, 5) schedule - this means, for example, that when the screen is on APN/WiFi will be enabled even when the battery is low, or that the regular schedule won't occur during the night period.</p> <p>SAMSUNG_PRIORART0000361 (Purdy):</p>

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'701 Claims	Android Device with One or More Apps
	<div> </div> <p>Android: Most phones don't make it easy to switch cellular data connection on and off, even if doing so really helps save your battery. JuiceDefender toggles wireless data and Wi-Fi on and off every so often to preserve power.</p> <p>The whole point of a smartphone with Google apps baked in is constant connectivity, of course, and you don't want to shut off access to your email, Google Voice messages, and other online services. But when you're walking around, at your office desk, and generally not actively using your phone, you probably don't need your phone to check in every minute with the mothership. JuiceDefender lets you set a time interval—5 minutes, 15, 30, an hour, two hours—at which its background process will re-enable your carrier APN, see if there are new messages or data coming in, and then shut off again. You can also set similar Wi-Fi connectivity rules, or only have web data enabled when you've got your screen on. Besides the battery savings, those who like to parse out their email checks and avoid minute-by-minute distractions see some benefit here, too.</p> <p><i>See, e.g., SAMSUNG_PRIORART0000351 (Configuration-Translated):</i></p> <div> <p>Schedule Enable APN for 5m every 30m</p> </div> <p>“• Schedule: used to configure how often Juice Defender will activate the APN / WIFI to synchronize emails, social networks, etc ..., we select the interval in the bar of your submenu for example 5 minutes every half hour also has the Quick button to minimize the connection time for</p>

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	<p>the previous example would be 2 minutes every half hour, I recommend not using this option if the selected time period is too short, it may not give you time to connect.”</p> <p><i>See, e.g.,</i> SAMSUNG_PRIORART0000361 (Purdy):</p> <p>Schedule Enable APN+MMS 2m every 15m</p> <p>“JuiceDefender lets you set a time interval—5 minutes, 15, 30, an hour, two hours— at which its background process will re-enable your carrier APN, see if there are new messages or data coming in, and then shut off again.”</p> <p><i>See, e.g.,</i> SAMSUNG_PRIORART0000335 (Ruddock):</p> <p>Schedule Enable Data/WiFi for 1m every 15m</p> <p><u>GreenPower App</u></p> <p>POUZERATE0000196 (GreenPower User Guide) (“Global Wireless settings This is a shortcut to the phone system wireless settings where the user can find the setting “Mobile Network”. That one should be checked or Green Power won't be able to properly manage Mobile Network.</p> <p>Screen off wireless delay This setting defines how long Green Power should wait before switching off wireless when the screen is turned off. Delaying turning off wireless is useful for instance if the user is reading something on the screen, not touching it. At some point the screen might turns off and you will touch it or press some buttons to switch it on again. Therefore, the wireless shouldn't be interrupted here. So, instead of switching off the wireless at once when the screen turns off, Green Power will wait that this delay elapses before switching off the wireless.</p>

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'701 Claims	Android Device with One or More Apps
	<p>Wireless on delay This setting defines how long Green Power keeps the wireless on before turning it off again. This applies to the Wifi is the setting "Manage Wifi" is selected, and this applies to the Mobile Network if the setting "Manage Mobile Network" is selected.</p> <p>Wireless off delay This setting defines how long Green Power keeps the wireless off before turning it on again. This applies to the Wifi is the setting "Manage Wifi" is selected, and this applies to the Mobile Network if the setting "Manage Mobile Network" is selected.</p> <p>Screen on setting If this is selected, the wireless will be kept on when the screen is on. This applies to the Wifi is the setting "Manage Wifi" is selected, and this applies to the Mobile Network if the setting "Manage Mobile Network" is selected.</p> <p>If this is not selected, then Green Power will not make any difference whether the screen is on or off:: It will regularly switch on and off wireless if needed even if the screen is on. This can be useful if the you are using the phone for anything else than using wireless data (calling, playing local game, etc). In such a case you don't need the wireless to be always on.</p> <p>Power on setting If this is selected, the wireless will be kept on when the phone is connected to a power source. This applies to the Wifi is the setting "Manage Wifi" is selected, and this applies to the Mobile Network if the setting "Manage Mobile Network" is selected.</p> <p>This overrides the "Screen on setting": If this is selected and the power is connected, then wireless will be kept on whatever the screen state is.</p> <p>If this is not selected, then Green Power will not make any difference whether the phone is connected to the power or not:: It will regularly switch on and off wireless if needed.</p>

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'701 Claims	Android Device with One or More Apps
	<p>Check Traffic If this is selected, then prior to turning off wireless, Green Power will check that there is no network traffic. If there is, it will wait a few seconds and checks again until there is no traffic anymore.”)</p>
<p>[2] The wireless end-user device of claim 1, wherein the one or more processors are configured to determine that the first end-user application is running in a background state when a user of the device is not directly interacting with that application or perceiving any benefit from that application.</p>	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g.,</i> the disclosures identified for claims [1 pre] – [1e].</p>
<p>[3] The wireless end-user device of claim 1, further comprising a user interface to provide a user of the device with information regarding why the first differential traffic control policy is applied to the first end-user application.</p>	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g.,</i> the disclosures identified for claims [1 pre] – [1e].</p>
<p>[4] The wireless end-user device of claim 1, further comprising a user interface to</p>	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p>

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'701 Claims	Android Device with One or More Apps
inform a user of the device when there are options to set, control, override, or modify service usage controls that affect the first differential traffic control policy.	<i>See, e.g.</i> , the disclosures identified for claims [1 pre] – [1e].
[5] The wireless end-user device of claim 1, wherein the first differential traffic control policy is part of a multimode profile having different policies for different networks.	Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures: <i>See, e.g.</i> , the disclosures identified for claims [1 pre] – [1e].
[6] The wireless end-user device of claim 5, wherein the one or more processors are further configured to select a traffic control policy from the multimode profile based at least in part on the type of network connection currently in use by the device.	Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures: <i>See, e.g.</i> , the disclosures identified for claims [1 pre] – [1e].
[7] The wireless end-user device of claim 6, wherein the one or more processors are further configured to, when the type of network connection is at least one type of WLAN	Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures: <i>See, e.g.</i> , the disclosures identified for claims [1 pre] – [1e].

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'701 Claims	Android Device with One or More Apps
connection, select a traffic control policy from the multimode profile based at least in part on a type of network connection from the WLAN to the Internet.	
[8] The wireless end-user device of claim 1, wherein the one or more processors are further configured to determine whether a second end-user application is running in a background state or as a foreground application, and control application access for Internet service activities by the second end-user application similar to the control of application access for the first end-user application, except the control of application access for Internet service activities by the second end-user application is based on a second differential traffic control policy that can be set different from the first	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g.</i>, the disclosures identified for claims [1 pre] – [1e].</p>

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'701 Claims	Android Device with One or More Apps
differential traffic control policy.	
[9] The wireless end-user device of claim 1, further comprising a network stack interface integrated with the API.	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g.,</i> the disclosures identified for claims [1 pre] – [1e].</p>
[10] The wireless end-user device of claim 1, further comprising a networking stack, wherein the one or more processors are further configured to, at an application service interface layer, identify application traffic flows prior to the flows entering the networking stack.	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g.,</i> the disclosures identified for claims [1 pre] – [1e].</p>
[11] The wireless end-user device of claim 1, wherein the one or more processors control of application access based on a first differential traffic control policy is applied to one of but not both of a connection to a roaming WWAN network and a connection to a home WWAN network.	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g.,</i> the disclosures identified for claims [1 pre] – [1e].</p>

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'701 Claims	Android Device with One or More Apps
[12] The wireless end-user device of claim 1, wherein the one or more processors are further configured to dynamically change the application of the first differential traffic control policy based on a power state of the device.	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g.,</i> the disclosures identified for claims [1 pre] – [1e].</p>
[13] The wireless end-user device of claim 1, wherein the one or more processors are further configured to dynamically change the application of the first differential traffic control policy based on a device usage state.	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g.,</i> the disclosures identified for claims [1 pre] – [1e].</p>
[14] The wireless end-user device of claim 1, wherein the one or more processors are further configured to dynamically change the application of the first differential traffic control policy based on monitoring of user interaction with the device.	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g.,</i> the disclosures identified for claims [1 pre] – [1e].</p>

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'701 Claims	Android Device with One or More Apps
<p>[15] The wireless end-user device of claim 1, wherein the one or more processors are further configured to dynamically change the application of the first differential traffic control policy based on power control state changes for one or more of the modems.</p>	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g.,</i> the disclosures identified for claims [1 pre] – [1e].</p>
<p>[16] The wireless end-user device of claim 1, wherein the one or more processors are configured to associate the first end-user application with the differential traffic control policy based on an application behavior.</p>	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g.,</i> the disclosures identified for claims [1 pre] – [1e].</p>
<p>[17] The wireless end-user device of claim 1, wherein the differential traffic control policy defines that applications to which the policy applies can only have WWAN network access events during particular time windows.</p>	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g.,</i> the disclosures identified for claims [1 pre] – [1e].</p>

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'701 Claims	Android Device with One or More Apps
[18] The wireless end-user device of claim 1, wherein the one or more processors are further configured to update the first differential traffic control policy based on information received from a network element.	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g.,</i> the disclosures identified for claims [1 pre] – [1e].</p>
[19] The wireless end-user device of claim 1, further comprising an agent to block, modify, remove, or replace user interface messages generated by the first end-user application based on the applied differential traffic control policy.	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g.,</i> the disclosures identified for claims [1 pre] – [1e].</p>
[20] The wireless end-user device of claim 1, wherein the one or more processors configured to control application access are configured to selectively block access by the first end-user application by intercepting open, connect, and/or write requests by the first end-user application to a network stack.	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g.,</i> the disclosures identified for claims [1 pre] – [1e].</p>

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'701 Claims	Android Device with One or More Apps
[21] The wireless end-user device of claim 20, wherein the API responds to an intercepted request by the first end-user application by emulating network messaging.	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g.</i>, the disclosures identified for claims [1 pre] – [1e].</p>
[22] The wireless end-user device of claim 21, wherein emulating network messaging comprises responding to a network request from the particular application by blocking the request from passing to a network stack and returning to the particular application a message indicating the network request was not successful.	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g.</i>, the disclosures identified for claims [1 pre] – [1e].</p>
[23] The wireless end-user device of claim 1, the first differential traffic control policy comprising first and second sub-policies applicable respectively to Internet data service provided using the WWAN modem to connect to a home WWAN and a roaming	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g.</i>, the disclosures identified for claims [1 pre] – [1e].</p>

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'701 Claims	Android Device with One or More Apps
WWAN, wherein the one or more processors are further configured to apply the first sub-policy when Internet data service is provided through a home WWAN and to apply the second sub-policy when Internet data service is provided through a roaming WWAN.	
[24] The wireless end-user device of claim 1, the first differential traffic control policy comprising first, second, and third sub-policies applicable respectively to Internet data service provided using the WWAN modem and three different network types from the network types consisting of 2G, 3G, 4G, home, and roaming.	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g.</i>, the disclosures identified for claims [1 pre] – [1e].</p>
[25] The wireless end-user device of claim 1, wherein the one or more processors are configured to determine when the first end-user application is running in a background state	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g.</i>, the disclosures identified for claims [1 pre] – [1e].</p>

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'701 Claims	Android Device with One or More Apps
or as a foreground application based on a state of user interface priority for the application.	

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Exhibit B-10

Based on Headwater's apparent positions as to the scope of the patent's claims, as best they can be deciphered, the reference(s) charted below anticipate(s) or at least render(s) obvious the identified claims. The portions of the prior art reference cited below are not exhaustive but are exemplary in nature.

This disclosure is not an admission that Samsung concedes any claim construction implied or suggested by Headwater's apparent positions as to the scope of the patent's claims, nor is it an admission by Samsung that any of its products are covered by or infringe the patent's claims, particularly when they are properly construed and applied. Samsung is not taking any claim construction positions through this disclosure, including whether the preamble is a limitation.

Samsung reserves the right to rely on additional citations or sources of evidence that also may be applicable, or that may become applicable in light of claim construction, changes in Headwater's infringement contentions, and/or information obtained during discovery as the case progresses. Samsung further reserves the right to amend or supplement this claim chart at a later date as more fully set forth in the Invalidity Contentions. For example, Defendants are currently in the process of taking discovery from non-parties including Nokia, HMD, Citrix, Google, Apple, and Microsoft. Accordingly, Defendants reserve the right to modify, amend, and/or supplement these contentions as information becomes available from non-parties.

Android is mobile device operating system that was initially released in September 2008. Applications (or "apps") can be installed on mobile devices that run Android. Any mobile device that predates the '184 patent, running an Android version with one or more apps that also predate the '184 patent, qualifies as prior art under at least pre-AIA 35 U.S.C. §§ 102(a)/(b). Such a device was known, used, offered for sale, and/or sold in the United States before the '184 patent.

Exemplary mobile devices that predate the '184 patent include:

- HTC Dream/T-Mobile G1 (released September 2008)
- Nexus One (released January 2010)

Exemplary Android versions that predate the '184 patent include: ¹

¹ See, e.g., SAMSUNG_PRIORART0003998; SAMSUNG_PRIORART0004085; SAMSUNG_PRIORART0004081; SAMSUNG_PRIORART0004086; SAMSUNG_PRIORART0004083; SAMSUNG_PRIORART0004084.

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- Android 1.0 (released September 2008)
- Android 1.1 (released February 2009)
- Android Cupcake (1.5) (released April 2009)
- Android Donut (1.6) (released September 2009)
- Android Eclair (2.0, 2.0.1, 2.1) (released October 2009 - January 2010)
- Android Froyo (2.2) (released May 20, 2010)

Exemplary apps that predate the '184 patent include:²

- JuiceDefender (released January 2010) and its associated add-on application, UltimateJuice (collectively "JuiceDefender App")
- GreenPower (released March 2010)

As a specific example, a Nexus One mobile device running Android Froyo 2.2 with the JuiceDefender application installed qualifies as prior art under at least pre-AIA 35 U.S.C. §§ 102(a)/(b). This device was known, used, offered for sale, and/or sold in the United States on or before May 20, 2010. At least the various documents cited in this claim chart describe the functionality of this device.

To the extent it is argued that Android Device with One or More Apps does not disclose or include each and every asserted claim limitation, either expressly or inherently, it would have been obvious to a POSITA to incorporate any of the teachings from the references identified in Exhibits B-01 through B-11, and B-B (whose exemplary citations for each limitation are incorporated herein) into Android Device with One or More Apps. Indeed, it would have been obvious to make such combinations and a POSITA would have had reason and motivation to make such combinations at least for reasons described herein and in the cover pleading.

'184 Claims	Android Device with One or More Apps
[1 pre] A wireless end-user device, comprising:	To the extent the preamble is a limitation, Android Device with One or More Apps discloses and/or renders obvious this element. For example, see the following passages and/or figures, as well as related disclosures:

² See, e.g., SAMSUNG_PRIORART0000335-SAMSUNG_PRIORART0000383; POUZERATE0000001-POUZERATE0000261.

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'184 Claims	Android Device with One or More Apps
	<p><u>Nexus One</u> The Nexus One is an example of an Android smartphone.</p> <p><i>See, e.g., SAMSUNG_PRIORART0000001 (Nexus) at 17:</i></p> <div> <p style="text-align: center;">Getting to know your phone</p> </div> <p><u>JuiceDefender App</u></p> <p>JuiceDefender is a mobile application (or “app”) intended to run on a mobile device, such as an Android smartphone. The Nexus One is an example of an Android smartphone capable of running JuiceDefender.</p> <p>SAMSUNG_PRIORART0000379 (Latedroid) (“JuiceDefender saves battery power (lots of it!)”)</p>

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'184 Claims	Android Device with One or More Apps
	<p>by controlling the device data connection and/or WiFi ... You can schedule regular APN/WiFi activation to let background data sync occur and have APN/WiFi enabled while the screen is on. It also helps in minimizing distractions.”)</p> <p>SAMSUNG_PRIORART0000361 (Purdy) (“Android: Most phones don't make it easy to switch cellular data connection on and off, even if doing so really helps save your battery. JuiceDefender toggles wireless data and Wi-Fi on and off every so often to preserve power.”)</p> <p><u>GreenPower App</u></p> <p><u>GreenPower is a mobile application (or “app”) intended to run on a mobile device, such an Android smartphone. The Nexus One is an example of an Android smartphone capable of running GreenPower.</u></p> <p><i>See, e.g.,</i> POUZERATE0000015 (GDG Oslo) at 5:</p>

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'184 Claims	Android Device with One or More Apps
	<div><h2>Background</h2><ul style="list-style-type: none">History of GreenPower app<ul style="list-style-type: none">2010: My first HTC heroMarch 2010: First Free version publishedOctober 2010: First Paid version publishedJan 2013:<ul style="list-style-type: none">1.3M downloads Free (>2500/day)200.000 active users<div><p>23.01.2013 - GDG Oslo - 5/35</p></div><p><i>See, e.g.,</i> POUZERATE0000002 (App Circus) at 9:</p></div>

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'184 Claims	Android Device with One or More Apps
	<p>Be mainstream</p> <ul style="list-style-type: none"> ▶ Cross Android versions <ul style="list-style-type: none"> ◦ Froyo ◦ Gingerbread ◦ Honeycomb ◦ Ice cream sandwich (as soon as someone offers me a Galaxy Nexus) ▶ Cross technologies <ul style="list-style-type: none"> ◦ GSM ◦ CDMA ◦ 2G, 3G, LTE ▶ 18 languages (not everybody speaks English, I know, I'm French) 
<p>[1a] a wireless wide area network (WWAN) modem to communicate data for Internet service activities between the device and at least one</p>	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><u>Nexus One</u></p>

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'184 Claims	Android Device with One or More Apps		
<p>WWAN, when configured for and connected to the at least one WWAN; and</p>	<p><i>See, e.g., SAMSUNG_PRIORART0000001 (Nexus) at 332:</i></p> <table border="1"> <tr> <td>Cellular & wireless</td><td> <p>Nexus One GSM phones compatible with 3G mobile networks from AT&T (U.S.) and Rogers Wireless (Canada): 3G UMTS bands I/II/V: 2100, 1900, 850 MHz</p> <p>Nexus One GSM phones compatible with 3G mobile networks from T-Mobile (U.S.): 3G UMTS bands I/IV/VIII: 2100, 1700(AWS), 900 MHz</p> <p>All Nexus One GSM phones: HSDPA 7.2Mbps HSUPA 2Mbps GSM/EDGE 850, 900, 1800, 1900 MHz Wi-Fi 802.11b/g Bluetooth 2.1 + EDR A2DP stereo Bluetooth</p> </td></tr> </table> <p><u>JuiceDefender App</u></p> <p>SAMSUNG_PRIORART0000379 (Latedroid) (“JuiceDefender saves battery power (lots of it!) by controlling the device data connection and/or WiFi ... You can schedule regular APN/WiFi activation to let background data sync occur and have APN/WiFi enabled while the screen is on. It also helps in minimizing distractions.”).</p> <p>SAMSUNG_PRIORART0000351 (Configuration-Translated) (“APN: activates / deactivates the APN connection, in its submenu we find the MMS button that activated configures the reception of MMS in the same way that we have the APN and Prefer Wifi that activated will try to connect first to this and if to five seconds does not find an available network will activate the APN. WIFI: activates / deactivates the WIFI connection, in its submenu we find the following buttons, Auto Disable turns off the wifi in the case of not finding a network available to save battery, in case it is</p>	Cellular & wireless	<p>Nexus One GSM phones compatible with 3G mobile networks from AT&T (U.S.) and Rogers Wireless (Canada): 3G UMTS bands I/II/V: 2100, 1900, 850 MHz</p> <p>Nexus One GSM phones compatible with 3G mobile networks from T-Mobile (U.S.): 3G UMTS bands I/IV/VIII: 2100, 1700(AWS), 900 MHz</p> <p>All Nexus One GSM phones: HSDPA 7.2Mbps HSUPA 2Mbps GSM/EDGE 850, 900, 1800, 1900 MHz Wi-Fi 802.11b/g Bluetooth 2.1 + EDR A2DP stereo Bluetooth</p>
Cellular & wireless	<p>Nexus One GSM phones compatible with 3G mobile networks from AT&T (U.S.) and Rogers Wireless (Canada): 3G UMTS bands I/II/V: 2100, 1900, 850 MHz</p> <p>Nexus One GSM phones compatible with 3G mobile networks from T-Mobile (U.S.): 3G UMTS bands I/IV/VIII: 2100, 1700(AWS), 900 MHz</p> <p>All Nexus One GSM phones: HSDPA 7.2Mbps HSUPA 2Mbps GSM/EDGE 850, 900, 1800, 1900 MHz Wi-Fi 802.11b/g Bluetooth 2.1 + EDR A2DP stereo Bluetooth</p>		

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'184 Claims	Android Device with One or More Apps
	<p>deactivated we will have to activate it manually; Enable on Schedule / Peak / Screen will activate the wifi as we have configured those buttons that we will see below.”)</p> <p>SAMSUNG_PRIORART0000361 (Purdy) (“Android: Most phones don't make it easy to switch cellular data connection on and off, even if doing so really helps save your battery. JuiceDefender toggles wireless data and Wi-Fi on and off every so often to preserve power.”).</p> <p>SAMSUNG_PRIORART0000335 (Ruddock) (“Juice Defender is a battery conservation app. It uses various triggers, rules, and timers to control how often your device utilizes 3G/EDGE APN’s (data connections) as well as WiFi. These data connections are the number one drainers of battery life when your phone is idle, so Juice Defender allows you to decide when, where, and how often you want them to be active.”).</p> <p><u>GreenPower App</u></p> <p>POUZERATE0000196 (GreenPower User Guide) (“Manage Mobile Network If this setting is selected, then Green Power will regularly turn on and off the Mobile Network connection, based on the durations specified in the settings below.</p> <p>If this setting is not selected, then Green Power will leave the Mobile Network as it is, never turning it on or off.</p> <p>Please note that in order for Green Power to turn on / off Mobile Network, this one has to be manually enabled by the user first in the phone settings (Wireless & networks → Mobile Network) or in Green Power settings (Global wireless settings → Mobile Network) . Green Power can't itself turn on Mobile Network as this is a limitation of the Android system for security and cost reasons.”).</p>
[1b] one or more processors configured to, for a time when	Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:

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'184 Claims	Android Device with One or More Apps		
<p>data communication for Internet service activities is provided by the WWAN modem,</p>	<p><i>See, e.g.</i>, SAMSUNG_PRIORART0000001 (Nexus) at 331:</p> <table border="1"> <tr> <td>Processor</td><td>Qualcomm QSD 8250, 1 GHz</td></tr> </table> <p><i>See, e.g.</i>, SAMSUNG_PRIORART0000001 (Nexus) at 320:</p> <p>Accounts & sync settings screen</p> <p>Background data Check to permit applications to synchronize data in the background, whether or not you are actively working in them. Unchecking this setting can save battery power and lowers (but does not eliminate) data use.</p> <p>Auto-sync Check to permit applications to synchronize data on their own schedule. If you uncheck this setting, you must touch an account in the list on this screen, press Menu ☰, and touch Sync now to synchronize data for that account. Synchronizing data automatically is disabled if Background data is unchecked. In that case, the Auto-sync checkbox is dimmed.</p> <p>SAMSUNG_PRIORART0000001 (Nexus) at 115-116 (“You can configure background data use and synchronization options for all of the applications on your phone. You can also configure what kinds of data you synchronize for each account. Some applications, such as Gmail and Calendar, have their own synchronization settings.”).</p> <p>SAMSUNG_PRIORART0000001 (Nexus) at 115-116:</p>	Processor	Qualcomm QSD 8250, 1 GHz
Processor	Qualcomm QSD 8250, 1 GHz		

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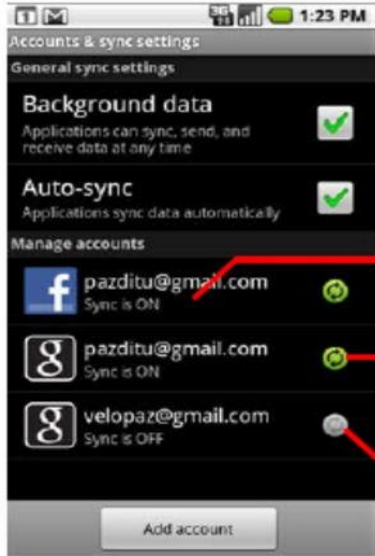


'184 Claims	Android Device with One or More Apps
	<p>The screen displays your current sync settings and a list of your current accounts.</p>  <p>Touch the account to configure.</p> <p>Some or all information from this account is configured to sync automatically with your phone.</p> <p>No information from this account syncs automatically with your phone.</p> <p> indicates that some or all of an account's information is configured to sync automatically with your phone.</p> <p> indicates that none of an account's information is configured to sync automatically with your phone.</p>
<p>[1c] classify whether a particular application associated with an Internet service access request, and capable of both interacting with a user in a user interface foreground of the device, and</p>	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g., SAMSUNG_PRIORART0000001 (Nexus) at 320:</i></p>

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'184 Claims	Android Device with One or More Apps
<p>at least some Internet service activities when not interacting with a user in the device user interface foreground, is interacting with the user in the device user interface foreground,</p>	<div> <h3>Accounts & sync settings screen</h3> </div> <div> <p>Background data Check to permit applications to synchronize data in the background, whether or not you are actively working in them. Unchecking this setting can save battery power and lowers (but does not eliminate) data use.</p> </div> <div> <p>Auto-sync Check to permit applications to synchronize data on their own schedule. If you uncheck this setting, you must touch an account in the list on this screen, press Menu ☰, and touch Sync now to synchronize data for that account. Synchronizing data automatically is disabled if Background data is unchecked. In that case, the Auto-sync checkbox is dimmed.</p> </div> <div> <p>SAMSUNG_PRIORART0000001 (Nexus) at 115-116 (“You can configure background data use and synchronization options for all of the applications on your phone. You can also configure what kinds of data you synchronize for each account. Some applications, such as Gmail and Calendar, have their own synchronization settings.”).</p> </div> <div> <p>SAMSUNG_PRIORART0000001 (Nexus) at 115-116:</p> </div>

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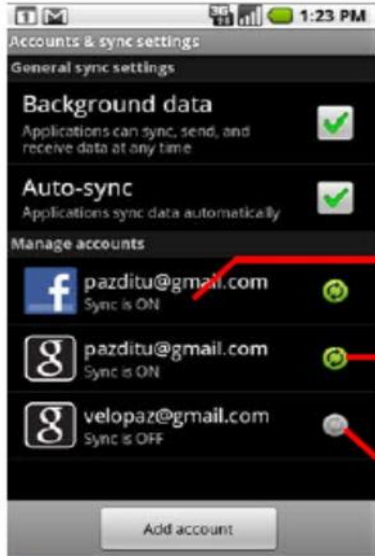


'184 Claims	Android Device with One or More Apps
	<p>The screen displays your current sync settings and a list of your current accounts.</p>  <p>Touch the account to configure.</p> <p>Some or all information from this account is configured to sync automatically with your phone.</p> <p>No information from this account syncs automatically with your phone.</p> <p> indicates that some or all of an account's information is configured to sync automatically with your phone.</p> <p> indicates that none of an account's information is configured to sync automatically with your phone.</p>
<p>[1d] apply a differential traffic control policy to the Internet service access request, based on (i) whether the application is classified as interacting with the user, and (ii) a differential traffic control policy list</p>	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><u>Nexus One</u></p> <p>See, e.g., SAMSUNG_PRIORART0000001 (Nexus) at 320:</p>

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'184 Claims	Android Device with One or More Apps
<p>distinguishing between a first one or more applications resident on the device and a second one or more applications resident on the device, such that, the one or more processors are operable to, in a first state wherein the particular application is one of the first one or more applications, and the particular application is not classified as interacting with a user in the device user interface foreground, block the Internet service access request, and the one or more processors are operable to allow the Internet service access request in at least one other state, and</p>	<p>Accounts & sync settings screen</p> <p>Background data Check to permit applications to synchronize data in the background, whether or not you are actively working in them. Unchecking this setting can save battery power and lowers (but does not eliminate) data use.</p> <p>Auto-sync Check to permit applications to synchronize data on their own schedule. If you uncheck this setting, you must touch an account in the list on this screen, press Menu ☰, and touch Sync now to synchronize data for that account. Synchronizing data automatically is disabled if Background data is unchecked. In that case, the Auto-sync checkbox is dimmed.</p> <p>SAMSUNG_PRIORART0000001 (Nexus) at 115-116 (“You can configure background data use and synchronization options for all of the applications on your phone. You can also configure what kinds of data you synchronize for each account. Some applications, such as Gmail and Calendar, have their own synchronization settings.”).</p> <p><u>JuiceDefender App</u></p> <p>SAMSUNG_PRIORART0000379 (Latedroid):</p>

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'184 Claims	Android Device with One or More Apps
	<div> <h2>JuiceDefender</h2> </div> <div> </div> <div> <p>JuiceDefender features to your liking.</p> </div> <div> <p>JuiceDefender saves battery power (<i>lots of it!</i>) by controlling the device data connection and/or WiFi.</p> </div> <div> <p>You can schedule regular APN/WiFi activation to let background data sync occur and have APN/WiFi enabled while the screen is on. It also helps in minimizing distractions ;)</p> </div> <div> </div> <div> <p>The <i>Easy Mode</i> is a no-fuss one-click way to let your battery last longer - much longer. Just enable JuiceDefender by clicking on the big button and you're ready to go!</p> </div> <div> <p>If you want more fine-grained control, try <i>Advanced Mode</i>, where you can configure all</p> </div>

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'184 Claims	Android Device with One or More Apps
	<p>There are 5 <i>triggers</i> for the enable/disable behaviour:</p> <p>Battery - when battery level gets low (less than 15%), disable APN/WiFi, and re-enable them when battery level is restored. APN/WiFi will also be enabled while the device is being recharged.</p> <p>Schedule - regularly enable APN/WiFi for a short period of time, to <i>let background data sync</i> occur (email, Twitter, Facebook, stock quotes...). If <i>Quick</i> is disabled APN/WiFi stays enabled for a longer period, useful if your data connection is very slow or you need to sync lots of data.</p> <p>Night schedule (requires <i>UltimateJuice</i>) - disable APN/WiFi during night time; you can also optionally put the phone in Silent Mode.</p> <p>Screen - enable APN/WiFi <i>while the screen is on</i> to allow browsing, tweeting, procrastination and general internet-powered enjoyment, regardless of scheduled events and battery level.</p> <p>Location (requires <i>UltimateJuice</i>) - this trigger controlled by the '<i>AutoWiFi</i>' button. It disables WiFi when the device is not in range of any known WiFi network. The location is determined via the cellular network, so it's usually quite coarse. It's a fully automatic set-it-and-forget-it WiFi manager!</p> <p>The <i>priority order</i> of the triggers is 1) location (WiFi only), 2) screen, 3) battery, 4) night schedule, 5) schedule - this means, for example, that when the screen is on APN/WiFi will be enabled even when the battery is low, or that the regular schedule won't occur during the night period.</p> <p>SAMSUNG_PRIORART0000361 (Purdy):</p>

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'184 Claims	Android Device with One or More Apps
	<div> </div> <p>Android: Most phones don't make it easy to switch cellular data connection on and off, even if doing so really helps save your battery. JuiceDefender toggles wireless data and Wi-Fi on and off every so often to preserve power.</p> <p>The whole point of a smartphone with Google apps baked in is constant connectivity, of course, and you don't want to shut off access to your email, Google Voice messages, and other online services. But when you're walking around, at your office desk, and generally not actively using your phone, you probably don't need your phone to check in every minute with the mothership. JuiceDefender lets you set a time interval—5 minutes, 15, 30, an hour, two hours—at which its background process will re-enable your carrier APN, see if there are new messages or data coming in, and then shut off again. You can also set similar Wi-Fi connectivity rules, or only have web data enabled when you've got your screen on. Besides the battery savings, those who like to parse out their email checks and avoid minute-by-minute distractions see some benefit here, too.</p> <p><i>See, e.g., SAMSUNG_PRIORART0000351 (Configuration-Translated):</i></p> <div> <p>Schedule Enable APN for 5m every 30m</p> </div> <p>“• Schedule: used to configure how often Juice Defender will activate the APN / WIFI to synchronize emails, social networks, etc ..., we select the interval in the bar of your submenu for example 5 minutes every half hour also has the Quick button to minimize the connection time for</p>

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'184 Claims	Android Device with One or More Apps
	<p>the previous example would be 2 minutes every half hour, I recommend not using this option if the selected time period is too short, it may not give you time to connect.”</p> <p><i>See, e.g.,</i> SAMSUNG_PRIORART0000361 (Purdy):</p> <p>Schedule Enable APN+MMS 2m every 15m</p> <p>“JuiceDefender lets you set a time interval—5 minutes, 15, 30, an hour, two hours— at which its background process will re-enable your carrier APN, see if there are new messages or data coming in, and then shut off again.”</p> <p><i>See, e.g.,</i> SAMSUNG_PRIORART0000335 (Ruddock):</p> <p>Schedule Enable Data/WiFi for 1m every 15m</p> <p><u>GreenPower App</u></p> <p>POUZERATE0000196 (GreenPower User Guide) (“Manage Wifi If this setting is selected, then Green Power will regularly turn on and off the Wifi connection, based on the durations specified in the settings below.</p> <p>If this setting is not selected, then Green Power will leave the Wifi as it is, never turning it on or off.</p> <p>Please note that if you manually switches off the Wifi, then Green Power will unselect the “Manage Wifi” setting in order not to automatically switch on the Wifi again despite your manual action. Then, if you switch back on the Wifi or reselect “Manage Wifi” setting, Green Power will resume managing Wifi connection.</p> <p>Manage Mobile Network</p>

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
'184 Claims	Android Device with One or More Apps
	<p>If this setting is selected, then Green Power will regularly turn on and off the Mobile Network connection, based on the durations specified in the settings below.</p> <p>If this setting is not selected, then Green Power will leave the Mobile Network as it is, never turning it on or off.</p> <p>Please note that in order for Green Power to turn on / off Mobile Network, this one has to be manually enabled by the user first in the phone settings (Wireless & networks → Mobile Network) or in Green Power settings (Global wireless settings → Mobile Network) . Green Power can't itself turn on Mobile Network as this is a limitation of the Android system for security and cost reasons.”).</p>
<p>[1e] for at least one of the first or second one or more applications, disallow Internet data communication for that application based on an application-specific amount of Internet data usage reaching a limit.</p>	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><u>Nexus One</u></p> <p><i>See, e.g., SAMSUNG_PRIORART0000001 (Nexus) at 67:</i></p> <p>To limit your data connection to 2G networks</p> <p>You can extend your battery life by limiting your data connections to 2G networks (GPRS or EDGE). When you are connected to a 2G network, you may want to postpone activities that transmit a lot of data, such as sending, uploading, or downloading pictures or video, until you are connected to a faster mobile or other wireless network.</p> <ol style="list-style-type: none"> 1 Press Home , press Menu , and touch Settings to open the Settings application. 2 Touch Wireless & networks > Mobile networks and check Use only 2G networks. <p><i>See, e.g., SAMSUNG_PRIORART0000001 (Nexus) at 199:</i></p>

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'184 Claims	Android Device with One or More Apps
	<p>Exchanging messages</p> <p>You can send text (SMS) messages of up to 160 characters to another mobile phone. If you keep typing after the limit, your message is delivered as a series of messages.</p> <p>Multimedia (MMS) messages can contain text and a picture, a recorded voice, an audio file, a video, or a picture slideshow.</p> <p>Messaging automatically converts a message into a multimedia message if you send it to an email address instead of a phone number, add a subject, or attach a media file.</p> <p><i>See, e.g., SAMSUNG_PRIORART0000001 (Nexus) at 203:</i></p> <p>Multimedia message (MMS) settings</p> <p>Delivery reports Check to receive a report on the messages you send.</p> <p>Read reports Check to receive reports when your messages are read or deleted.</p> <p>Auto-retrieve Uncheck to download only the heading of multimedia messages, which you can then touch to open a menu to download the whole message. This is useful for controlling how much data you download, for example, when connected to a slow data network.</p> <p>Roaming auto-retrieve Uncheck to download only the header of multimedia messages when connected to other carrier's data networks. This is useful for avoiding unexpected charges, if your contract has limits on data roaming.</p> <p><i>See, e.g., SAMSUNG_PRIORART0000001 (Nexus) at 260:</i></p>

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'184 Claims	Android Device with One or More Apps
	<p>To share a video</p> <p>You can share a video by sending it in an email or with a multimedia (MMS) message. MMS messages have size limits, typically 3MB, or approximately 1 minute of high-quality video or 2 minutes of low-quality video. See “Changing Camera settings” on page 247. You can also share a video by uploading it to the YouTube web site.</p> <ol style="list-style-type: none"> 1 While viewing an album, press Menu  twice. 2 Check the videos or pictures to share. 3 Touch Share. 4 In the menu that opens, touch the application to use to share the selected videos. <p>The application you selected opens with the video attached to a new message. If you selected YouTube, you’re prompted to enter details about the video to upload. For more information, see the section on that application.</p> <p>POUZERATE0000196 (GreenPower User Guide) (“Check Traffic If this is selected, then prior to turning off wireless, Green Power will check that there is no network traffic. If there is, it will wait a few seconds and checks again until there is no traffic anymore.”).</p>
<p>[2] The wireless end-user device of claim 1, wherein the one or more processors are configured to classify that the particular application is interacting with the user in the device user interface foreground when the user of the device is directly interacting with that</p>	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g., SAMSUNG_PRIORART0000001 (Nexus) at 320:</i></p>

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'184 Claims	Android Device with One or More Apps
<p>application or perceiving any benefit from that application.</p>	<p>Accounts & sync settings screen</p> <p>Background data Check to permit applications to synchronize data in the background, whether or not you are actively working in them. Unchecking this setting can save battery power and lowers (but does not eliminate) data use.</p> <p>Auto-sync Check to permit applications to synchronize data on their own schedule. If you uncheck this setting, you must touch an account in the list on this screen, press Menu ≡, and touch Sync now to synchronize data for that account. Synchronizing data automatically is disabled if Background data is unchecked. In that case, the Auto-sync checkbox is dimmed.</p> <p>SAMSUNG_PRIORART0000001 (Nexus) at 115-116 (“You can configure background data use and synchronization options for all of the applications on your phone. You can also configure what kinds of data you synchronize for each account. Some applications, such as Gmail and Calendar, have their own synchronization settings.”).</p> <p><i>See, e.g.,</i> the disclosures identified for claims [1c].</p>
<p>[3] The wireless end-user device of claim 1, wherein the one or more processors are configured to classify that the particular application is interacting with the user in the device user interface foreground based on a state of</p>	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g.,</i> the disclosures identified for claims [1c], [2].</p>

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'184 Claims	Android Device with One or More Apps
user interface priority for the application.	
[4] The wireless end-user device of claim 1, wherein the one or more processors are configured to classify that the particular application is not interacting with the user in the device user interface foreground when the application is providing or utilizing a background data service.	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g.,</i> the disclosures identified for claims [1c], [2].</p>
[5] The wireless end-user device of claim 1, wherein the one or more processors are configured to, when the Internet service access request is blocked in the first state, delay network activity in association with the first Internet access request until a second Internet access request is received and allowed.	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g.,</i> the disclosures identified for claims [1 pre] – [1d].</p>
[6] The wireless end-user device of claim 1, further comprising a user interface,	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p>

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'184 Claims	Android Device with One or More Apps
<p>wherein the user interface is to inform the user of the device when there are options to set, control, override, or modify at least one aspect of the differential traffic control policy and/or the differential traffic control policy list.</p>	<p><i>See, e.g.</i>, the disclosures identified for claims [1 pre] – [1d].</p>
<p>[7] The wireless end-user device of claim 1, further comprising</p> <p>a wireless local area network (WLAN) modem to communicate data for Internet service activities between the device and at least one WLAN, when configured for and connected to the at least one WLAN,</p> <p>wherein the one or more processors are further configured to, for a time when the WLAN modem is to provide data communication for Internet service activities, not apply the differential traffic control policy.</p>	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g.</i>, the disclosures identified for claims [1 pre] – [1d].</p>

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'184 Claims	Android Device with One or More Apps
<p>[8] The wireless end-user device of claim 7, wherein the one or more processors are further configured to, for a time when the WLAN modem is to provide data communication for Internet service activities, not count an application-specific amount of Internet data usage toward the limit.</p>	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g.,</i> the disclosures identified for claims [1 pre] – [1d].</p>
<p>[9] The wireless end-user device of claim 1, wherein the at least one WWAN comprises a home WWAN and a roaming WWAN, and wherein the one or more processors are further configured to apply the differential traffic control policy for a time when data communication for Internet service activities is provided by the WWAN modem and the roaming WWAN, and to not apply the differential traffic control policy for a time when data communication for Internet service activities is</p>	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g.,</i> the disclosures identified for claims [1 pre] – [1d].</p>

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'184 Claims	Android Device with One or More Apps
provided by the WWAN modem and the home WWAN.	
[10] The wireless end-user device of claim 1, wherein the one or more processors are further configured to dynamically change a determination of whether to apply the differential traffic control policy based on a power state of the device.	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g.</i>, the disclosures identified for claims [1 pre] – [1d].</p>
[11] The wireless end-user device of claim 1, wherein the one or more processors are further configured to dynamically change the determination of whether to apply the differential traffic control policy based on a device usage state.	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g.</i>, the disclosures identified for claims [1 pre] – [1d].</p>
[12] The wireless end-user device of claim 1, wherein the one or more processors are further configured to dynamically change the determination of whether to apply the differential traffic	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g.</i>, the disclosures identified for claims [1 pre] – [1d].</p>

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'184 Claims	Android Device with One or More Apps
control policy based on power control state changes for the WWAN modem.	
[13] The wireless end-user device of claim 1, wherein the one or more processors are further configured to update at least a portion of the differential traffic control policy and/or the differential traffic control policy list based on information received from a network element.	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g.,</i> the disclosures identified for claims [1 pre] – [1d].</p>
[14] The wireless end-user device of claim 1, wherein the one or more processors are further configured to, when the Internet service access request is blocked, prevent the first Internet access request from causing a change to a power state of the modem.	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g.,</i> the disclosures identified for claims [1 pre] – [1d].</p>
[15] The wireless end-user device of claim 14, wherein the one or more processors are further configured to, when the power state of the modem is	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g.,</i> the disclosures identified for claims [1 pre] – [1d].</p>

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'184 Claims	Android Device with One or More Apps
idle or sleeping, prevent power state changes to the modem until an Internet service access request is allowed.	
[16]. The wireless end-user device of claim 1, wherein the one or more processors are further configured to, when the Internet service access request is blocked, instruct the first end-user application to transition to a different state.	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g.,</i> the disclosures identified for claims [1 pre] – [1d].</p>
[17] The wireless end-user device of claim 1, further comprising an agent to block, modify, remove, or replace user interface messages generated by the particular application based on the block of the Internet service access request.	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g.,</i> the disclosures identified for claims [1 pre] – [1d].</p>
[18] The wireless end-user device of claim 1, wherein the one or more processors operable to block the Internet service access request are configured to selectively block	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g.,</i> the disclosures identified for claims [1 pre] – [1d].</p>

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'184 Claims	Android Device with One or More Apps
the Internet service access request by intercepting open, connect, and/or write requests by the particular application to a network stack.	
[19] The wireless end-user device of claim 18, wherein the one or more processors are configured to respond to an intercepted request by the particular application by emulating network messaging.	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g.,</i> the disclosures identified for claims [1 pre] – [1d].</p>
[20]. The wireless end-user device of claim 19, wherein emulating network messaging comprises responding to a network request from the particular application by blocking the request from passing to a network stack and returning to the particular application a message indicating the network request was not successful.	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g.,</i> the disclosures identified for claims [1 pre] – [1d].</p>

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U.S. Patent No. 9,521,578

Exhibit C-10

Based on Headwater's apparent positions as to the scope of the patent's claims, as best they can be deciphered, the reference(s) charted below anticipate(s) or at least render(s) obvious the identified claims. The portions of the prior art reference cited below are not exhaustive but are exemplary in nature.

This disclosure is not an admission that Samsung concedes any claim construction implied or suggested by Headwater's apparent positions as to the scope of the patent's claims, nor is it an admission by Samsung that any of its products are covered by or infringe the patent's claims, particularly when they are properly construed and applied. Samsung is not taking any claim construction positions through this disclosure, including whether the preamble is a limitation.

Samsung reserves the right to rely on additional citations or sources of evidence that also may be applicable, or that may become applicable in light of claim construction, changes in Headwater's infringement contentions, and/or information obtained during discovery as the case progresses. Samsung further reserves the right to amend or supplement this claim chart at a later date as more fully set forth in the Invalidity Contentions. For example, Defendants are currently in the process of taking discovery from non-parties including Nokia, HMD, Citrix, Google, Apple, and Microsoft. Accordingly, Defendants reserve the right to modify, amend, and/or supplement these contentions as information becomes available from non-parties.

Android is mobile device operating system that was initially released in September 2008. Applications (or "apps") can be installed on mobile devices that run Android. Any mobile device that predates the '578 patent, running an Android version with one or more apps that also predate the '578 patent, qualifies as prior art under at least pre-AIA 35 U.S.C. §§ 102(a)/(b). Such a device was known, used, offered for sale, and/or sold in the United States before the '578 patent.

Exemplary mobile devices that predate the '578 patent include:

- HTC Dream/T-Mobile G1 (released September 2008)
- Nexus One (released January 2010)

Exemplary Android versions that predate the '578 patent include: ¹

¹ See, e.g., SAMSUNG_PRIORART0003998; SAMSUNG_PRIORART0004085; SAMSUNG_PRIORART0004081; SAMSUNG_PRIORART0004086; SAMSUNG_PRIORART0004083; SAMSUNG_PRIORART0004084.

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- Android 1.0 (released September 2008)
- Android 1.1 (released February 2009)
- Android Cupcake (1.5) (released April 2009)
- Android Donut (1.6) (released September 2009)
- Android Eclair (2.0, 2.0.1, 2.1) (released October 2009 - January 2010)
- Android Froyo (2.2) (released May 20, 2010)

Exemplary apps that predate the '578 patent include:²

- JuiceDefender (released January 2010) and its associated add-on application, UltimateJuice (collectively "JuiceDefender App")
- GreenPower (released March 2010)

As a specific example, a Nexus One mobile device running Android Froyo 2.2 with the JuiceDefender application installed qualifies as prior art under at least pre-AIA 35 U.S.C. §§ 102(a)/(b). This device was known, used, offered for sale, and/or sold in the United States on or before May 20, 2010. At least the various documents cited in this claim chart describe the functionality of this device.

To the extent it is argued that Android Device with One or More Apps does not disclose or include each and every asserted claim limitation, either expressly or inherently, it would have been obvious to a POSITA to incorporate any of the teachings from the references identified in Exhibits C-01 through C-11, and C-C (whose exemplary citations for each limitation are incorporated herein) into Android Device with One or More Apps. Indeed, it would have been obvious to make such combinations and a POSITA would have had reason and motivation to make such combinations at least for reasons described herein and in the cover pleading.

'578 Claims	Android Device with One or More Apps
[1 pre] A wireless end-user device, comprising:	To the extent the preamble is a limitation, Android Device with One or More Apps discloses and/or renders obvious this element. For example, see the following passages and/or figures, as well as related disclosures:

² See, e.g., SAMSUNG_PRIORART0000335-SAMSUNG_PRIORART0000383; POUZERATE0000001-POUZERATE0000261.

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'578 Claims	Android Device with One or More Apps
	<p><u>Nexus One</u> The Nexus One is an example of an Android smartphone.</p> <p><i>See, e.g., SAMSUNG_PRIORART00000001 (Nexus) at 17:</i></p> <div> <p style="text-align: center;">Getting to know your phone</p> </div> <p><u>JuiceDefender App</u></p> <p>JuiceDefender is a mobile application (or “app”) intended to run on a mobile device, such an Android smartphone. The Nexus One is an example of an Android smartphone capable of running JuiceDefender.</p> <p>SAMSUNG_PRIORART0000379 (Latedroid) (“JuiceDefender saves battery power (lots of</p>

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'578 Claims	Android Device with One or More Apps
	<p>it!) by controlling the device data connection and/or WiFi ... You can schedule regular APN/WiFi activation to let background data sync occur and have APN/WiFi enabled while the screen is on. It also helps in minimizing distractions.”)</p> <p>SAMSUNG_PRIORART0000361 (Purdy) (“Android: Most phones don't make it easy to switch cellular data connection on and off, even if doing so really helps save your battery. JuiceDefender toggles wireless data and Wi-Fi on and off every so often to preserve power.”)</p> <p><u>GreenPower App</u></p> <p>GreenPower is a mobile application (or “app”) intended to run on a mobile device, such an Android smartphone. The Nexus One is an example of an Android smartphone capable of running GreenPower.</p> <p><i>See, e.g.,</i> POUZERATE0000015 (GDG Oslo) at 5:</p>

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'578 Claims	Android Device with One or More Apps
	<div><h2>Background</h2><ul style="list-style-type: none">History of GreenPower app<ul style="list-style-type: none">2010: My first HTC heroMarch 2010: First Free version publishedOctober 2010: First Paid version publishedJan 2013:<ul style="list-style-type: none">1.3M downloads Free (>2500/day)200.000 active users<div><p>23.01.2013 - GDG Oslo - 5/35</p></div><p>See, e.g., POUZERATE0000002 (App Circus) at 9:</p></div>

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'578 Claims	Android Device with One or More Apps
	<p>Be mainstream</p> <ul style="list-style-type: none"> ▶ Cross Android versions <ul style="list-style-type: none"> ◦ Froyo ◦ Gingerbread ◦ Honeycomb ◦ Ice cream sandwich (as soon as someone offers me a Galaxy Nexus) ▶ Cross technologies <ul style="list-style-type: none"> ◦ GSM ◦ CDMA ◦ 2G, 3G, LTE ▶ 18 languages (not everybody speaks English, I know, I'm French) 
<p>[1a] a wireless wide area network (WWAN) modem to communicate data for Internet service activities between the device and at least one WWAN, when configured for and</p>	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><u>Nexus One</u></p> <p><i>See, e.g., SAMSUNG_PRIORART0000001 (Nexus) at 332:</i></p>

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'578 Claims	Android Device with One or More Apps	
connected to the at least one WWAN;	Cellular & wireless	<p>Nexus One GSM phones compatible with 3G mobile networks from AT&T (U.S.) and Rogers Wireless (Canada): 3G UMTS bands I/II/V: 2100, 1900, 850 MHz</p> <p>Nexus One GSM phones compatible with 3G mobile networks from T-Mobile (U.S.): 3G UMTS bands I/IV/VIII: 2100, 1700(AWS), 900 MHz</p> <p>All Nexus One GSM phones: HSDPA 7.2Mbps HSUPA 2Mbps GSM/EDGE 850, 900, 1800, 1900 MHz Wi-Fi 802.11b/g Bluetooth 2.1 + EDR A2DP stereo Bluetooth</p>
	<p><u>JuiceDefender App</u></p> <p>SAMSUNG_PRIORART0000379 (Latedroid) (“JuiceDefender saves battery power (lots of it!) by controlling the device data connection and/or WiFi ... You can schedule regular APN/WiFi activation to let background data sync occur and have APN/WiFi enabled while the screen is on. It also helps in minimizing distractions.”).</p> <p>SAMSUNG_PRIORART0000351 (Configuration-Translated) (“APN: activates / deactivates the APN connection, in its submenu we find the MMS button that activated configures the reception of MMS in the same way that we have the APN and Prefer Wifi that activated will try to connect first to this and if to five seconds does not find an available network will activate the APN. WIFI: activates / deactivates the WIFI connection, in its submenu we find the following buttons, Auto Disable turns off the wifi in the case of not finding a network available to save</p>	

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'578 Claims	Android Device with One or More Apps
	<p>battery, in case it is deactivated we will have to activate it manually; Enable on Schedule / Peak / Screen will activate the wifi as we have configured those buttons that we will see below.”)</p> <p>SAMSUNG_PRIORART0000361 (Purdy) (“Android: Most phones don't make it easy to switch cellular data connection on and off, even if doing so really helps save your battery. JuiceDefender toggles wireless data and Wi-Fi on and off every so often to preserve power.”).</p> <p>SAMSUNG_PRIORART0000335 (Ruddock) (“Juice Defender is a battery conservation app. It uses various triggers, rules, and timers to control how often your device utilizes 3G/EDGE APN’s (data connections) as well as WiFi. These data connections are the number one drainers of battery life when your phone is idle, so Juice Defender allows you to decide when, where, and how often you want them to be active.”).</p> <p><u>GreenPower App</u></p> <p>POUZERATE0000196 (GreenPower User Guide) (“Manage Mobile Network If this setting is selected, then Green Power will regularly turn on and off the Mobile Network connection, based on the durations specified in the settings below.</p> <p>If this setting is not selected, then Green Power will leave the Mobile Network as it is, never turning it on or off.</p> <p>Please note that in order for Green Power to turn on / off Mobile Network, this one has to be manually enabled by the user first in the phone settings (Wireless & networks → Mobile Network) or in Green Power settings (Global wireless settings → Mobile Network) . Green Power can't itself turn on Mobile Network as this is a limitation of the Android system for security and cost reasons.”).</p>
[1b] a wireless local area network (WLAN) modem to	Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:

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'578 Claims	Android Device with One or More Apps
<p>communicate data for Internet service activities between the device and at least one WLAN, when configured for and connected to the at least one WLAN;</p>	<p><i>See, e.g.</i>, the disclosures identified for claims [1 pre] – [1a].</p> <p><u>GreenPower App</u></p> <p>POUZERATE0000196 (GreenPower User Guide) (“Manage Wifi If this setting is selected, then Green Power will regularly turn on and off the Wifi connection, based on the durations specified in the settings below.</p> <p>If this setting is not selected, then Green Power will leave the Wifi as it is, never turning it on or off.</p> <p>Please note that if you manually switches off the Wifi, then Green Power will unselect the “Manage Wifi” setting in order not to automatically switch on the Wifi again despite your manual action. Then, if you switch back on the Wifi or reselect “Manage Wifi” setting, Green Power will resume managing Wifi connection.”).</p>
<p>[1c] a non-transitory memory to store a differential traffic control policy applicable to data communicated for Internet service activities using the WWAN modem and the at least one WWAN, but not applicable to data communicated for Internet service activities using the WLAN modem and the at least one WLAN;</p>	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><u>Nexus One</u></p> <p><i>See, e.g.</i>, SAMSUNG_PRIORART00000001 (Nexus) at 65-68:</p>

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'578 Claims	Android Device with One or More Apps
	<h2>Connecting to networks and devices</h2> <p>Your phone can connect to a variety of networks and devices, including mobile networks for voice and data transmission, Wi-Fi data networks, and Bluetooth devices, such as headsets. You can also connect your phone to a computer, to transfer files from your phone's microSD card.</p> <p>In this section</p> <ul style="list-style-type: none">"Connecting to mobile networks" on page 66"Connecting to Wi-Fi networks" on page 68"Connecting to Bluetooth devices" on page 71"Connecting to a computer via USB" on page 74"Connecting to virtual private networks" on page 76"Working with secure certificates" on page 78

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










'578 Claims	Android Device with One or More Apps										
	<p>Connecting to mobile networks</p> <p>When you assemble your phone with a SIM card from your wireless service provider (see "Installing the battery, SIM, and microSD card" on page 18), your phone is configured to use your provider's mobile networks for voice calls and for transmitting data.</p> <p>Your phone is configured to work with many mobile carriers' networks. If your phone does not connect to a network when you insert a SIM card and turn it on, contact your carrier to obtain the details of its access point name. See "To edit or create a new access point" on page 71.</p> <p>Different locations may have different mobile networks available. Initially, your phone is configured to use the fastest mobile network available for data. But you can configure your phone to use only a slower 2G network for data, to extend the life of your battery between charges. You can also configure your phone to access a different set of networks entirely, or to behave in special ways when roaming.</p> <p>The icons in the Status bar indicate which kind of data network you're connected to and the voice and data network signal strength.</p> <table border="1"> <tr> <td></td><td>Connected to the fastest 3G networks (UMTS or HSDPA)</td></tr> <tr> <td></td><td>Connected to the second-fastest network (EDGE)</td></tr> <tr> <td></td><td>Connected to a 2G network (GPRS)</td></tr> <tr> <td></td><td>The more bars are lit, the stronger the wireless signal</td></tr> <tr> <td></td><td>Connected to another wireless service provider's network (roaming)</td></tr> </table> <p>When you're connected to slower networks, you may want to postpone using your phone for data-intensive tasks until you are connected to a faster network again, or find a Wi-Fi network to connect to. See "Connecting to Wi-Fi networks" on page 68.</p> <p>To determine what network you're using</p> <ol style="list-style-type: none"> <li>1 Press Home , press Menu , and touch Settings to open the Settings application. <li>2 Touch Wireless & networks > Mobile networks > Access Point Names. The name of the wireless service provider you're currently registered with is selected in the list. 		Connected to the fastest 3G networks (UMTS or HSDPA)		Connected to the second-fastest network (EDGE)		Connected to a 2G network (GPRS)		The more bars are lit, the stronger the wireless signal		Connected to another wireless service provider's network (roaming)
	Connected to the fastest 3G networks (UMTS or HSDPA)										
	Connected to the second-fastest network (EDGE)										
	Connected to a 2G network (GPRS)										
	The more bars are lit, the stronger the wireless signal										
	Connected to another wireless service provider's network (roaming)										

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

'578 Claims	Android Device with One or More Apps
	<p>To disable data when roaming</p> <p>You can prevent your phone from transmitting data over other carriers' mobile networks when you leave an area that is covered by your carrier's networks. This is useful for controlling expenses if your cell plan doesn't include data roaming.</p> <ol style="list-style-type: none"> 1 Press Home , press Menu , and touch Settings, to open the Settings application. 2 Touch Wireless & networks > Mobile networks and uncheck Data roaming. <p>With Data roaming unchecked, you can still transmit data with a Wi-Fi connection. See "Connecting to Wi-Fi networks" on page 68.</p> <p>To limit your data connection to 2G networks</p> <p>You can extend your battery life by limiting your data connections to 2G networks (GPRS or EDGE). When you are connected to a 2G network, you may want to postpone activities that transmit a lot of data, such as sending, uploading, or downloading pictures or video, until you are connected to a faster mobile or other wireless network.</p> <ol style="list-style-type: none"> 1 Press Home , press Menu , and touch Settings to open the Settings application. 2 Touch Wireless & networks > Mobile networks and check Use only 2G networks. <p>To edit or create a new access point</p> <p>If you and your wireless service provider determine that you need to change the settings of your current access point name (APN) or to create a new one, you must obtain the APN and detailed settings from your provider.</p> <ol style="list-style-type: none"> 1 Press Home , press Menu , and touch Settings to open the Settings application. 2 Touch Wireless & networks > Mobile networks > Access Point Names. 3 Touch an existing APN to edit it. Or press Menu  and touch New APN. Enter the APN settings that you obtained from your wireless service provider by touching each setting that you need to edit. 4 When you're finished, press Menu  and touch Save. 5 If you created a new APN, touch it in the APNs screen to start using it.

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






'578 Claims	Android Device with One or More Apps				
	<h2>Connecting to Wi-Fi networks</h2> <p>Wi-Fi is a wireless networking technology that can provide Internet access at distances of up to 100 meters, depending on the Wi-Fi router and your surroundings.</p> <p>To use Wi-Fi on your phone, you access a wireless access point, or "hotspot." Some access points are open and you can simply connect to them. Others are hidden or implement other security features, so you must configure your phone so it can connect to them.</p> <p>There are numerous systems for securing Wi-Fi connections, including some that rely on secure certificates or other schemes to ensure that only authorized users can connect. For information about installing secure certificates, see "Working with secure certificates" on page 78.</p> <p>Turn off Wi-Fi when you're not using it, to extend the life of your battery.</p> <p>The Status bar displays icons that indicate Wi-Fi status.</p> <table border="1"> <tr> <td></td><td>Connected to a Wi-Fi network (waves indicate connection strength)</td></tr> <tr> <td></td><td>Notification that an open Wi-Fi network is in range</td></tr> </table> <p>When you connect to a Wi-Fi network, the phone obtains a network address and other information it needs from the network, using the DHCP protocol. To configure the phone with a fixed IP address and other advanced settings, press Menu  and touch Advanced. See "Advanced Wi-Fi settings screen" on page 310.</p> <h3>To turn Wi-Fi on and connect to a Wi-Fi network</h3> <p>If you're adding a Wi-Fi network when first setting up your phone, Wi-Fi is turned on automatically, so you can skip to step 4.</p> <ol style="list-style-type: none"> <li>1 Press Home , press Menu , and touch Settings. <li>2 Touch Wireless & networks > Wi-Fi settings. 		Connected to a Wi-Fi network (waves indicate connection strength)		Notification that an open Wi-Fi network is in range
	Connected to a Wi-Fi network (waves indicate connection strength)				
	Notification that an open Wi-Fi network is in range				

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'578 Claims	Android Device with One or More Apps
	<p><u>JuiceDefender App</u></p> <p>SAMSUNG_PRIORART0000335 (Ruddock) (“Juice Defender is a battery conservation app. It uses various triggers, rules, and timers to control how often your device utilizes 3G/EDGE APN’s (data connections) as well as WiFi. These data connections are the number one drainers of battery life when your phone is idle, so Juice Defender allows you to decide when, where, and how often you want them to be active.”).</p> <p><u>GreenPower App</u></p> <p>POUZERATE0000196 (GreenPower User Guide) (“Manage Wifi If this setting is selected, then Green Power will regularly turn on and off the Wifi connection, based on the durations specified in the settings below.</p> <p>If this setting is not selected, then Green Power will leave the Wifi as it is, never turning it on or off.</p> <p>Please note that if you manually switches off the Wifi, then Green Power will unselect the “Manage Wifi” setting in order not to automatically switch on the Wifi again despite your manual action. Then, if you switch back on the Wifi or reselect “Manage Wifi” setting, Green Power will resume managing Wifi connection.</p> <p>Manage Mobile Network If this setting is selected, then Green Power will regularly turn on and off the Mobile Network connection, based on the durations specified in the settings below.</p> <p>If this setting is not selected, then Green Power will leave the Mobile Network as it is, never turning it on or off.</p>

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'578 Claims	Android Device with One or More Apps
	<p>Please note that in order for Green Power to turn on / off Mobile Network, this one has to be manually enabled by the user first in the phone settings (Wireless & networks → Mobile Network) or in Green Power settings (Global wireless settings → Mobile Network) . Green Power can't itself turn on Mobile Network as this is a limitation of the Android system for security and cost reasons.”).</p>
<p>[1d] a user interface to allow a user to set one or more of a plurality of aspects of the differential traffic control policy to select one or more applications that are only allowed to utilize the at least one WWAN for Internet service activities when those applications are classified as interacting with a user in the device user interface foreground; and</p>	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g.</i>, the disclosures identified for claims [1c].</p> <p><u>Nexus One</u></p> <p><i>See, e.g.</i>, SAMSUNG_PRIORART0000001 (Nexus) at 115-117:</p>

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
'578 Claims	Android Device with One or More Apps
	<p>Configuring account sync and display options</p> <p>You can configure background data use and synchronization options for all of the applications on your phone. You can also configure what kinds of data you synchronize for each account. Some applications, such as Gmail and Calendar, have their own synchronization settings.</p> <p>Some applications, such as Contacts and Gmail, can sync data from multiple applications. Others, such as Calendar, sync data only from the first Google Account you sign into on your phone, or from an account associated specifically with that application.</p> <p>For some accounts, syncing is two-directional; changes that you make to the information on your phone are made to the copy of that information on the web. Your Google Account works this way. Other accounts support only one-way sync; the information on your phone is read-only.</p> <p>You can use the Contacts display options to configure the kinds of contacts that are displayed, as described in "Changing which contacts are displayed" on page 106.</p> <p>To configure general sync settings</p> <p>1 Open the Accounts & Sync Settings screen.</p> <p>You can do this in Contacts by pressing Menu  and touching Accounts, or directly in the Settings application (press Home , press Menu , and touch Settings).</p>

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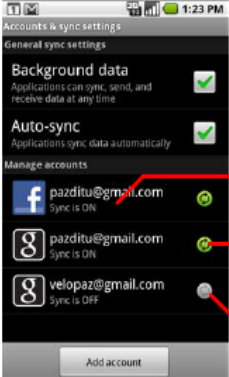


'578 Claims	Android Device with One or More Apps
	<p>The screen displays your current sync settings and a list of your current accounts.</p>  <p>Touch the account to configure.</p> <p>Some or all information from this account is configured to sync automatically with your phone.</p> <p>No information from this account syncs automatically with your phone.</p> <p> indicates that some or all of an account's information is configured to sync automatically with your phone.</p> <p> indicates that none of an account's information is configured to sync automatically with your phone.</p> <p>2 Check or uncheck Background data to control whether applications and services can transmit data when you are not working with them directly (that is, when they are running in the background).</p> <p>If you uncheck this option, Gmail stops receiving new mail, Calendar stops syncing events, and so on, until you touch the Refresh menu item or send an email.</p> <p>3 Check or uncheck Auto-sync to control whether changes you make to information on the phone or on the web are automatically synced with each other.</p> <p>For example, when this option is checked, changes that you make in Contacts on the phone are automatically made in Google Contacts on the web.</p> <p>If you uncheck this option, you may be able to use an application's tools to sync data manually. See "To sync information manually" on page 117.</p>

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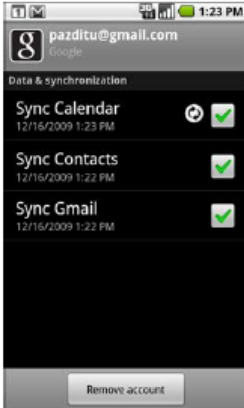
'578 Claims	Android Device with One or More Apps
	<p>To sync information manually</p> <ol style="list-style-type: none">1 Open the Accounts & Sync Settings screen.2 Touch the account whose data you want to sync.3 Press Menu  and touch Sync now. <p>To change an account's sync settings</p> <ol style="list-style-type: none">1 Open the Accounts & Sync Settings screen.2 Touch the account whose sync settings you want to change. The Data and Synchronization screen opens, displaying a list of the kinds of information the account can sync. Checked items are configured to sync to your phone.  <ol style="list-style-type: none">3 Check or uncheck the kinds of information you want to sync to the phone. Unchecking an option does not remove the information from your phone; it simply stops it from syncing automatically. To remove the information previously synced for the account, you must remove the account. <p><i>See, e.g., SAMSUNG_PRIORART0000001 (Nexus) at 218:</i></p>

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'578 Claims	Android Device with One or More Apps
	<p>Open in background Check to open new windows in the background when you touch & hold a link and touch Open in new window. This is useful when you are working with windows that take a long time to download and display. Press Menu ☰, touch Windows, and then touch the new window to view it. Uncheck if you prefer new windows that you open in this way to open in place of the current window. See "To switch Browser windows" on page 213.</p> <p>Set home page Opens a dialog where you can enter the URL of a page that you want to open whenever you open a new Browser window. If you prefer to open new Browser windows more quickly, by not opening any page by default, leave the dialog blank.</p> <p><i>See, e.g., SAMSUNG_PRIORART0000001 (Nexus) at 286:</i></p> <p>Refresh settings</p> <p>These settings control how frequently the information on the News & Weather widget is updated. In addition to using these settings, adding or removing the News & Weather widget from the Home screen also turns Auto-refresh on or off. For more about working with widgets, see "Customizing the Home screen" on page 58.</p> <p>Auto-refresh Check to have News & Weather update information automatically, at the frequency you set with Refresh interval. Uncheck to update the news and weather only when you press Menu ☰ and touch Refresh. For automatic refresh to work, you must also have Background Data turned on in the Settings application. See "Accounts & sync settings" on page 320.</p> <p><i>See, e.g., SAMSUNG_PRIORART0000001 (Nexus) at 320:</i></p>

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
'578 Claims	Android Device with One or More Apps
	<p>Accounts & sync settings</p> <p>Use the Accounts & Sync settings to add, remove, and manage your Google and other supported accounts. You also use these settings to control how and whether all applications send, receive, and sync data on their own schedules, and whether all applications can synchronize user data automatically.</p> <p>Gmail, Calendar, and other applications may also have their own settings to control how they synchronize data; see the sections on those applications for details.</p> <p>Accounts & sync settings screen</p> <p>Background data Check to permit applications to synchronize data in the background, whether or not you are actively working in them. Unchecking this setting can save battery power and lowers (but does not eliminate) data use.</p> <p>Auto-sync Check to permit applications to synchronize data on their own schedule. If you uncheck this setting, you must touch an account in the list on this screen, press Menu , and touch Sync now to synchronize data for that account. Synchronizing data automatically is disabled if Background data is unchecked. In that case, the Auto-sync checkbox is dimmed.</p> <p>Manage accounts The rest of this screen lists the Google Accounts and other accounts you've added to the phone. Adding accounts is described in "Accounts" on page 111.</p> <p>If you touch an account in this screen, its account screen opens.</p> <p><u>JuiceDefender App</u></p> <p>SAMSUNG_PRIORART0000379 (Latedroid):</p>

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'578 Claims	Android Device with One or More Apps
	<div> <h2>JuiceDefender</h2> </div> <div> </div> <div> <p>JuiceDefender features to your liking.</p> </div> <div> <p>JuiceDefender saves battery power (<i>lots of it!</i>) by controlling the device data connection and/or WiFi.</p> </div> <div> <p>You can schedule regular APN/WiFi activation to let background data sync occur and have APN/WiFi enabled while the screen is on. It also helps in minimizing distractions ;)</p> </div> <div> </div> <div> <p>The <i>Easy Mode</i> is a no-fuss one-click way to let your battery last longer - much longer. Just enable JuiceDefender by clicking on the big button and you're ready to go!</p> </div> <div> <p>If you want more fine-grained control, try <i>Advanced Mode</i>, where you can configure all</p> </div>

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'578 Claims	Android Device with One or More Apps
	<p>There are 5 <i>triggers</i> for the enable/disable behaviour:</p> <p>Battery - when battery level gets low (less than 15%), disable APN/WiFi, and re-enable them when battery level is restored. APN/WiFi will also be enabled while the device is being recharged.</p> <p>Schedule - regularly enable APN/WiFi for a short period of time, to <i>let background data sync</i> occur (email, Twitter, Facebook, stock quotes...). If <i>Quick</i> is disabled APN/WiFi stays enabled for a longer period, useful if your data connection is very slow or you need to sync lots of data.</p> <p>Night schedule (requires <i>UltimateJuice</i>) - disable APN/WiFi during night time; you can also optionally put the phone in Silent Mode.</p> <p>Screen - enable APN/WiFi <i>while the screen is on</i> to allow browsing, tweeting, procrastination and general internet-powered enjoyment, regardless of scheduled events and battery level.</p> <p>Location (requires <i>UltimateJuice</i>) - this trigger controlled by the 'AutoWiFi' button. It disables WiFi when the device is not in range of any known WiFi network. The location is determined via the cellular network, so it's usually quite coarse. It's a fully automatic set-it-and-forget-it WiFi manager!</p> <p>The <i>priority order</i> of the triggers is 1) location (WiFi only), 2) screen, 3) battery, 4) night schedule, 5) schedule - this means, for example, that when the screen is on APN/WiFi will be enabled even when the battery is low, or that the regular schedule won't occur during the night period.</p> <p>SAMSUNG_PRIORART0000361 (Purdy):</p>

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'578 Claims	Android Device with One or More Apps
	<div> </div> <p>Android: Most phones don't make it easy to switch cellular data connection on and off, even if doing so really helps save your battery. JuiceDefender toggles wireless data and Wi-Fi on and off every so often to preserve power.</p> <p>The whole point of a smartphone with Google apps baked in is constant connectivity, of course, and you don't want to shut off access to your email, Google Voice messages, and other online services. But when you're walking around, at your office desk, and generally not actively using your phone, you probably don't need your phone to check in every minute with the mothership. JuiceDefender lets you set a time interval—5 minutes, 15, 30, an hour, two hours—at which its background process will re-enable your carrier APN, see if there are new messages or data coming in, and then shut off again. You can also set similar Wi-Fi connectivity rules, or only have web data enabled when you've got your screen on. Besides the battery savings,</p> <p>those who like to parse out their email checks and avoid minute-by-minute distractions see some benefit here, too.</p> <p><i>See, e.g., SAMSUNG_PRIORART0000351 (Configuration-Translated):</i></p> <div> <p>Schedule Enable APN for 5m every 30m</p> </div> <p>“• Schedule: used to configure how often Juice Defender will activate the APN / WIFI to synchronize emails, social networks, etc .., we select the interval in the bar of your submenu for example 5 minutes every half hour also has the Quick button to minimize the connection time</p>

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'578 Claims	Android Device with One or More Apps
	<p>for the previous example would be 2 minutes every half hour, I recommend not using this option if the selected time period is too short, it may not give you time to connect.”</p> <p><i>See, e.g.,</i> SAMSUNG_PRIORART0000361 (Purdy):</p> <div> <p>Schedule Enable APN+MMS 2m every 15m</p> </div> <p>“JuiceDefender lets you set a time interval—5 minutes, 15, 30, an hour, two hours— at which its background process will re-enable your carrier APN, see if there are new messages or data coming in, and then shut off again.”</p> <p><i>See, e.g.,</i> SAMSUNG_PRIORART0000335 (Ruddock):</p> <div> <p>Schedule Enable Data/WiFi for 1m every 15m</p> </div> <p><u>GreenPower App</u></p> <p>POUZERATE0000196 (GreenPower User Guide) (“Global Wireless settings This is a shortcut to the phone system wireless settings where the user can find the setting “Mobile Network”. That one should be checked or Green Power won't be able to properly manage Mobile Network.</p> <p>Screen off wireless delay This setting defines how long Green Power should wait before switching off wireless when the screen is turned off. Delaying turning off wireless is useful for instance if the user is reading something on the screen, not touching it. At some point the screen might turns off and you will touch it or press some buttons to switch it on again. Therefore, the wireless shouldn't be interrupted here. So, instead of switching off the wireless at once when the screen turns off, Green Power will wait that this delay elapses before switching off the wireless.</p>

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'578 Claims	Android Device with One or More Apps
	<p>Wireless on delay This setting defines how long Green Power keeps the wireless on before turning it off again. This applies to the Wifi is the setting "Manage Wifi" is selected, and this applies to the Mobile Network if the setting "Manage Mobile Network" is selected.</p> <p>Wireless off delay This setting defines how long Green Power keeps the wireless off before turning it on again. This applies to the Wifi is the setting "Manage Wifi" is selected, and this applies to the Mobile Network if the setting "Manage Mobile Network" is selected.</p> <p>Screen on setting If this is selected, the wireless will be kept on when the screen is on. This applies to the Wifi is the setting "Manage Wifi" is selected, and this applies to the Mobile Network if the setting "Manage Mobile Network" is selected.</p> <p>If this is not selected, then Green Power will not make any difference whether the screen is on or off:: It will regularly switch on and off wireless if needed even if the screen is on. This can be useful if the you are using the phone for anything else than using wireless data (calling, playing local game, etc). In such a case you don't need the wireless to be always on.</p> <p>Power on setting If this is selected, the wireless will be kept on when the phone is connected to a power source. This applies to the Wifi is the setting "Manage Wifi" is selected, and this applies to the Mobile Network if the setting "Manage Mobile Network" is selected.</p> <p>This overrides the "Screen on setting": If this is selected and the power is connected, then wireless will be kept on whatever the screen state is.</p> <p>If this is not selected, then Green Power will not make any difference whether the phone is connected to the power or not:: It will regularly switch on and off wireless if needed.</p>

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'578 Claims	Android Device with One or More Apps
	<p>Check Traffic If this is selected, then prior to turning off wireless, Green Power will check that there is no network traffic. If there is, it will wait a few seconds and checks again until there is no traffic anymore.”)</p>
<p>[1e] one or more processors configured to implement an application program interface (API) that allows a particular application to access one or more aspects of the differential traffic control policy applicable to that application, including whether the user-settable aspects of the policy only allow the particular application to utilize the at least one WWAN for Internet service activities when the particular application is classified as interacting with a user in the device user interface foreground</p>	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g.,</i> the disclosures identified for claims [1 pre] - [1d].</p> <p><u>Nexus One</u></p> <p><i>See, e.g.,</i> SAMSUNG_PRIORART0000001 (Nexus) at 319:</p> <p>Development screen The Development screen contains settings that are useful for developing Android applications. For full information, including documentation of the Android APIs and development tools, see the Android developer web site (http://developer.android.com).</p> <p>USB debugging Check to permit debugging tools on a computer to communicate with your phone via a USB connection.</p> <p>Stay awake Check to prevent the screen from dimming and locking when the phone is connected to a charger or to a USB device that provides power. Don't use this setting with a static image on the phone for long periods of time, or the screen may be marked with that image.</p> <p>Allow mock locations Check to permit a development tool on a computer to control where the phone believes it is located, rather than using the phone's own internal tools for this purpose.</p>

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'578 Claims	Android Device with One or More Apps
<p>[2] The wireless end-user device of claim 1, the one or more processors further configured to implement a network stack agent to apply the differential traffic control policy to Internet data service provided using the WWAN modem and the at least one WWAN, such that an Internet service access request associated with at least one application that is not classified as interacting with a user in the device interface foreground is blocked, based at least on a user-settable aspect of the differential traffic control policy for that application.</p>	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g.,</i> the disclosures identified for claims [1 pre] - [1e].</p>
<p>[3] The wireless end-user device of claim 1, the API further to indicate, to the particular application, one or more network access conditions based on the differential traffic control policy, wherein the one or network access conditions include a network access condition that indicates the</p>	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g.,</i> the disclosures identified for claims [1e].</p>

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'578 Claims	Android Device with One or More Apps
unavailability to the particular application of an Internet data service that is currently available via the WWAN modem to a different application.	
[4] The wireless end-user device of claim 1, wherein the one or more processors are further configured to classify that the particular application is interacting with the user in the device user interface foreground when a user of the device is directly interacting with the particular application or perceiving any benefit from the particular application.	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g.,</i> the disclosures identified for claims [1 pre] - [1e].</p>
[5] The wireless end-user device of claim 1, wherein the one or more processors are further configured to classify that the particular application is interacting with the user in the device user interface foreground based on a state of user interface priority for the application.	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g.,</i> the disclosures identified for claims [1 pre] - [1e].</p>

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'578 Claims	Android Device with One or More Apps
[6] The wireless end-user device of claim 1, wherein the one or more processors are further configured to classify that the first end-user application is not interacting with the user in the device user interface foreground when the application is providing or utilizing a background data service.	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g.,</i> the disclosures identified for claims [1 pre] - [1e].</p>
[7] The wireless end-user device of claim 1, the user interface to provide a user of the device with information regarding why the differential traffic control policy is applied to the particular application.	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g.,</i> the disclosures identified for claims [1 pre] - [1e].</p>
[8] The wireless end-user device of claim 1, wherein the differential traffic control policy is part of a multimode profile having different policies for different networks.	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g.,</i> the disclosures identified for claims [1 pre] - [1e].</p>
[9] The wireless end-user device of claim 8, wherein the one or more processors are further configured to select a traffic	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g.,</i> the disclosures identified for claims [1 pre] - [1e].</p>

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'578 Claims	Android Device with One or More Apps
control policy from the multimode profile based at least in part on the type of network connection currently in use by the device.	
[10] The wireless end-user device of claim 9, wherein the one or more processors are further configured to, when the type of network connection is at least one type of WLAN connection, select a traffic control policy from the multimode profile based at least in part on a type of network connection from the WLAN to the Internet.	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g.,</i> the disclosures identified for claims [1 pre] - [1e].</p>
[11] The wireless end-user device of claim 8, wherein the differential traffic control policy is the policy for a roaming WWAN network, the multimode profile having a second traffic control policy for a home WWAN network.	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g.,</i> the disclosures identified for claims [1 pre] - [1e].</p>
[12] The wireless end-user device of claim 1, the one or	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p>

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'578 Claims	Android Device with One or More Apps
more processors further comprising a network stack interface in communication with the API.	<i>See, e.g.</i> , the disclosures identified for claims [1 pre] - [1e].
[13] The wireless end-user device of claim 1, further comprising a networking stack, wherein the one or more processors are further configured to, at an application service interface layer, identify application traffic flows prior to the flows entering the networking stack.	Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures: <i>See, e.g.</i> , the disclosures identified for claims [1 pre] - [1e].
[14] The wireless end-user device of claim 1, wherein the API comprises a network access API.	Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures: <i>See, e.g.</i> , the disclosures identified for claims[1e].
[15] The wireless end-user device of claim 1, wherein the API further allows the particular application to access information indicating whether a current connected WWAN is a roaming network or a non-roaming network.	Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures: <i>See, e.g.</i> , the disclosures identified for claims [1e].

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'578 Claims	Android Device with One or More Apps
[16] The wireless end-user device of claim 1, wherein the API further informs the particular application when it is allowed to access Internet data service that is currently available via the WWAN modem.	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g.,</i> the disclosures identified for claims [1e].</p>
[17] The wireless end-user device of claim 1, wherein the API informs the particular application of one or more network traffic controls that the application is expected to implement.	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g.,</i> the disclosures identified for claims [1e].</p>
[18] The wireless end-user device of claim 1, wherein the API instructs the particular application to transition to a different state.	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g.,</i> the disclosures identified for claims [1e].</p>
[19] The wireless end-user device of claim 1, wherein the one or more processors are configured to associate the particular application with the differential traffic control policy	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g.,</i> the disclosures identified for claims [1 pre] - [1e].</p>

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'578 Claims	Android Device with One or More Apps
based on an application behavior.	
[20] The wireless end-user device of claim 1, the API comprising a network stack interface that intercepts network socket interface messages for applications and OS functions, the one or more processors configured to apply the differential traffic control policy to at least some of the intercepted network socket interface messages.	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g.,</i> the disclosures identified for claims [1 pre] - [1e].</p>
[21] The wireless end-user device of claim 1, wherein the one or more processors are further configured to update the differential traffic control policy based on information received from a network element.	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g.,</i> the disclosures identified for claims [1 pre] - [1e].</p>
[22] The wireless end-user device of claim 1, wherein the one or more processors are configured to apply the differential traffic control policy to selectively block network	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g.,</i> the disclosures identified for claims [1 pre] - [1e].</p>

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'578 Claims	Android Device with One or More Apps
access by the particular application by intercepting open, connect, and/or write requests by the particular application to a network stack.	

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Exhibit D-10

Based on Headwater's apparent positions as to the scope of the patent's claims, as best they can be deciphered, the reference(s) charted below anticipate(s) or at least render(s) obvious the identified claims. The portions of the prior art reference cited below are not exhaustive but are exemplary in nature.

This disclosure is not an admission that Samsung concedes any claim construction implied or suggested by Headwater's apparent positions as to the scope of the patent's claims, nor is it an admission by Samsung that any of its products are covered by or infringe the patent's claims, particularly when they are properly construed and applied. Samsung is not taking any claim construction positions through this disclosure, including whether the preamble is a limitation.

Samsung reserves the right to rely on additional citations or sources of evidence that also may be applicable, or that may become applicable in light of claim construction, changes in Headwater's infringement contentions, and/or information obtained during discovery as the case progresses. Samsung further reserves the right to amend or supplement this claim chart at a later date as more fully set forth in the Invalidity Contentions. For example, Defendants are currently in the process of taking discovery from non-parties including Nokia, HMD, Citrix, Google, Apple, and Microsoft. Accordingly, Defendants reserve the right to modify, amend, and/or supplement these contentions as information becomes available from non-parties.

Android is mobile device operating system that was initially released in September 2008. Applications (or "apps") can be installed on mobile devices that run Android. Any mobile device that predates the '445 patent, running an Android version with one or more apps that also predate the '445 patent, qualifies as prior art under at least pre-AIA 35 U.S.C. §§ 102(a)/(b). Such a device was known, used, offered for sale, and/or sold in the United States before the '445 patent.

Exemplary mobile devices that predate the '445 patent include:

- HTC Dream/T-Mobile G1 (released September 2008)
- Nexus One (released January 2010)

Exemplary Android versions that predate the '445 patent include: ¹

¹ See, e.g., SAMSUNG_PRIORART0003998; SAMSUNG_PRIORART0004085; SAMSUNG_PRIORART0004081; SAMSUNG_PRIORART0004086; SAMSUNG_PRIORART0004083; SAMSUNG_PRIORART0004084.

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- Android 1.0 (released September 2008)
- Android 1.1 (released February 2009)
- Android Cupcake (1.5) (released April 2009)
- Android Donut (1.6) (released September 2009)
- Android Eclair (2.0, 2.0.1, 2.1) (released October 2009 - January 2010)
- Android Froyo (2.2) (released May 20, 2010)

Exemplary apps that predate the ’445 patent include:²

- JuiceDefender (released January 2010) and its associated add-on application, UltimateJuice (collectively “JuiceDefender App”)
- GreenPower (released March 2010)

As a specific example, a Nexus One mobile device running Android Froyo 2.2 with the JuiceDefender application installed qualifies as prior art under at least pre-AIA 35 U.S.C. §§ 102(a)/(b). This device was known, used, offered for sale, and/or sold in the United States on or before May 20, 2010. At least the various documents cited in this claim chart describe the functionality of this device.

To the extent it is argued that Android Device with One or More Apps does not disclose or include each and every asserted claim limitation, either expressly or inherently, it would have been obvious to a POSITA to incorporate any of the teachings from the references identified in Exhibits D-01 through D-11, and D-D (whose exemplary citations for each limitation are incorporated herein) into Android Device with One or More Apps. Indeed, it would have been obvious to make such combinations and a POSITA would have had reason and motivation to make such combinations at least for reasons described herein and in the cover pleading.

'455 Claims	Android Device with One or More Apps
[1 pre] A wireless end-user device, comprising:	To the extent the preamble is a limitation, Android Device with One or More Apps discloses and/or renders obvious this element. For example, see the following passages and/or figures, as well as related disclosures:

² See, e.g., SAMSUNG_PRIORART0000335-SAMSUNG_PRIORART0000383; POUZERATE0000001-POUZERATE0000261.

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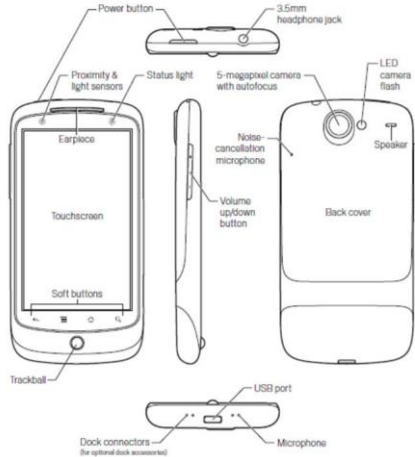
'455 Claims	Android Device with One or More Apps
	<p><u>Nexus One</u></p> <p>The Nexus One is an example of an Android smartphone.</p> <p><i>See, e.g.,</i> SAMSUNG_PRIORART0000001 (Nexus) at 17:</p> <div> <p>Getting to know your phone</p>  </div> <p><u>JuiceDefender App</u></p> <p>JuiceDefender is a mobile application (or “app”) intended to run on a mobile device, such as an Android smartphone. The Nexus One is an example of an Android smartphone capable of running JuiceDefender.</p> <p>SAMSUNG_PRIORART0000379 (Latedroid) (“JuiceDefender saves battery power (lots of it!)”)</p>

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'455 Claims	Android Device with One or More Apps
	<p>by controlling the device data connection and/or WiFi ... You can schedule regular APN/WiFi activation to let background data sync occur and have APN/WiFi enabled while the screen is on. It also helps in minimizing distractions.”)</p> <p>SAMSUNG_PRIORART0000361 (Purdy) (“Android: Most phones don't make it easy to switch cellular data connection on and off, even if doing so really helps save your battery. JuiceDefender toggles wireless data and Wi-Fi on and off every so often to preserve power.”)</p> <p><u>GreenPower App</u></p> <p>GreenPower is a mobile application (or “app”) intended to run on a mobile device, such as an Android smartphone. The Nexus One is an example of an Android smartphone capable of running GreenPower.</p> <p><i>See, e.g.</i>, POUZERATE0000015 (GDG Oslo) at 5:</p>

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'455 Claims	Android Device with One or More Apps
	<div><h2>Background</h2><ul style="list-style-type: none">History of GreenPower app<ul style="list-style-type: none">2010: My first HTC heroMarch 2010: First Free version publishedOctober 2010: First Paid version publishedJan 2013:<ul style="list-style-type: none">1.3M downloads Free (>2500/day)200.000 active users<div><p>23.01.2013 - GDG Oslo - 5/35</p></div><p><i>See, e.g.,</i> POUZERATE0000002 (App Circus) at 9:</p></div>

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'455 Claims	Android Device with One or More Apps
	<p>Be mainstream</p> <ul style="list-style-type: none"> ▶ Cross Android versions <ul style="list-style-type: none"> ◦ Froyo ◦ Gingerbread ◦ Honeycomb ◦ Ice cream sandwich (as soon as someone offers me a Galaxy Nexus) ▶ Cross technologies <ul style="list-style-type: none"> ◦ GSM ◦ CDMA ◦ 2G, 3G, LTE ▶ 18 languages (not everybody speaks English, I know, I'm French) 
<p>[1a] a wireless wide area network (WWAN) modem to communicate data for Internet service activities between the device and at least one</p>	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><u>Nexus One</u></p> <p><i>See, e.g., SAMSUNG_PRIORART0000001 (Nexus) at 332:</i></p>

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'455 Claims	Android Device with One or More Apps	
WWAN, when configured for and connected to the WWAN;	Cellular & wireless	<p>Nexus One GSM phones compatible with 3G mobile networks from AT&T (U.S.) and Rogers Wireless (Canada): 3G UMTS bands I/II/V: 2100, 1900, 850 MHz</p> <p>Nexus One GSM phones compatible with 3G mobile networks from T-Mobile (U.S.): 3G UMTS bands I/IV/VIII: 2100, 1700(AWS), 900 MHz</p> <p>All Nexus One GSM phones: HSDPA 7.2Mbps HSUPA 2Mbps GSM/EDGE 850, 900, 1800, 1900 MHz Wi-Fi 802.11b/g Bluetooth 2.1 + EDR A2DP stereo Bluetooth</p>
	<p><u>JuiceDefender App</u></p> <p>SAMSUNG_PRIORART0000379 (Latedroid) (“JuiceDefender saves battery power (lots of it!) by controlling the device data connection and/or WiFi ... You can schedule regular APN/WiFi activation to let background data sync occur and have APN/WiFi enabled while the screen is on. It also helps in minimizing distractions.”).</p> <p>SAMSUNG_PRIORART0000351 (Configuration-Translated) (“APN: activates / deactivates the APN connection, in its submenu we find the MMS button that activated configures the reception of MMS in the same way that we have the APN and Prefer Wifi that activated will try to connect first to this and if to five seconds does not find an available network will activate the APN. WIFI: activates / deactivates the WIFI connection, in its submenu we find the following buttons, Auto Disable turns off the wifi in the case of not finding a network available to save battery, in case it is deactivated we will have to activate it manually; Enable on Schedule / Peak / Screen will activate the wifi as we have configured those buttons that we will see below.”)</p>	

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'455 Claims	Android Device with One or More Apps
	<p>SAMSUNG_PRIORART0000361 (Purdy) (“Android: Most phones don't make it easy to switch cellular data connection on and off, even if doing so really helps save your battery. JuiceDefender toggles wireless data and Wi-Fi on and off every so often to preserve power.”).</p> <p>SAMSUNG_PRIORART0000335 (Ruddock) (“Juice Defender is a battery conservation app. It uses various triggers, rules, and timers to control how often your device utilizes 3G/EDGE APN’s (data connections) as well as WiFi. These data connections are the number one drainers of battery life when your phone is idle, so Juice Defender allows you to decide when, where, and how often you want them to be active.”).</p> <p><u>GreenPower App</u></p> <p>POUZERATE0000196 (GreenPower User Guide) (“Manage Mobile Network If this setting is selected, then Green Power will regularly turn on and off the Mobile Network connection, based on the durations specified in the settings below.</p> <p>If this setting is not selected, then Green Power will leave the Mobile Network as it is, never turning it on or off.</p> <p>Please note that in order for Green Power to turn on / off Mobile Network, this one has to be manually enabled by the user first in the phone settings (Wireless & networks → Mobile Network) or in Green Power settings (Global wireless settings → Mobile Network) . Green Power can't itself turn on Mobile Network as this is a limitation of the Android system for security and cost reasons.”).</p>
[1b] a wireless local area network (WLAN) modem to communicate data for Internet service activities between the	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g., the disclosures identified for claims [1 pre] – [1a].</i></p>

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'455 Claims	Android Device with One or More Apps		
<p>device and at least one WLAN, when configured for and connected to the WLAN; and</p>	<p><u>GreenPower App</u></p> <p>POUZERATE0000196 (GreenPower User Guide) (“Manage Wifi If this setting is selected, then Green Power will regularly turn on and off the Wifi connection, based on the durations specified in the settings below.</p> <p>If this setting is not selected, then Green Power will leave the Wifi as it is, never turning it on or off.</p> <p>Please note that if you manually switches off the Wifi, then Green Power will unselect the “Manage Wifi” setting in order not to automatically switch on the Wifi again despite your manual action. Then, if you switch back on the Wifi or reselect “Manage Wifi” setting, Green Power will resume managing Wifi connection.”).</p>		
<p>[1c] one or more processors configured to</p>	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g., SAMSUNG_PRIORART0000001 (Nexus) at 331:</i></p> <table border="1"> <tr> <td>Processor</td><td>Qualcomm QSD 8250, 1 GHz</td></tr> </table> <p><i>See, e.g., SAMSUNG_PRIORART0000001 (Nexus) at 320:</i></p>	Processor	Qualcomm QSD 8250, 1 GHz
Processor	Qualcomm QSD 8250, 1 GHz		

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'455 Claims	Android Device with One or More Apps
	<p>Accounts & sync settings screen</p> <p>Background data Check to permit applications to synchronize data in the background, whether or not you are actively working in them. Unchecking this setting can save battery power and lowers (but does not eliminate) data use.</p> <p>Auto-sync Check to permit applications to synchronize data on their own schedule. If you uncheck this setting, you must touch an account in the list on this screen, press Menu ☰, and touch Sync now to synchronize data for that account. Synchronizing data automatically is disabled if Background data is unchecked. In that case, the Auto-sync checkbox is dimmed.</p> <p>SAMSUNG_PRIORART0000001 (Nexus) at 115-116 (“You can configure background data use and synchronization options for all of the applications on your phone. You can also configure what kinds of data you synchronize for each account. Some applications, such as Gmail and Calendar, have their own synchronization settings.”).</p> <p>SAMSUNG_PRIORART0000001 (Nexus) at 115-116:</p>

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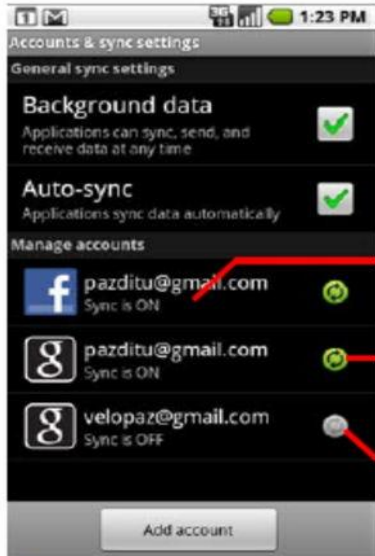


'455 Claims	Android Device with One or More Apps
	<p>The screen displays your current sync settings and a list of your current accounts.</p>  <p>Touch the account to configure.</p> <p>Some or all information from this account is configured to sync automatically with your phone.</p> <p>No information from this account syncs automatically with your phone.</p> <p> indicates that some or all of an account's information is configured to sync automatically with your phone.</p> <p> indicates that none of an account's information is configured to sync automatically with your phone.</p>
<p>[1d] classify, as a first classification, whether data for Internet service activities is to be communicated through the</p>	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g., SAMSUNG_PRIORART0000001 (Nexus) at 65-68:</i></p>

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'455 Claims	Android Device with One or More Apps
WWAN modem or the WLAN modem, and	<h2>Connecting to networks and devices</h2> <p>Your phone can connect to a variety of networks and devices, including mobile networks for voice and data transmission, Wi-Fi data networks, and Bluetooth devices, such as headsets. You can also connect your phone to a computer, to transfer files from your phone's microSD card.</p> <p>In this section</p> <ul style="list-style-type: none">"Connecting to mobile networks" on page 66"Connecting to Wi-Fi networks" on page 68"Connecting to Bluetooth devices" on page 71"Connecting to a computer via USB" on page 74"Connecting to virtual private networks" on page 76"Working with secure certificates" on page 78

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'455 Claims	Android Device with One or More Apps										
	<p>Connecting to mobile networks</p> <p>When you assemble your phone with a SIM card from your wireless service provider (see "Installing the battery, SIM, and microSD card" on page 18), your phone is configured to use your provider's mobile networks for voice calls and for transmitting data.</p> <p>Your phone is configured to work with many mobile carriers' networks. If your phone does not connect to a network when you insert a SIM card and turn it on, contact your carrier to obtain the details of its access point name. See "To edit or create a new access point" on page 71.</p> <p>Different locations may have different mobile networks available. Initially, your phone is configured to use the fastest mobile network available for data. But you can configure your phone to use only a slower 2G network for data, to extend the life of your battery between charges. You can also configure your phone to access a different set of networks entirely, or to behave in special ways when roaming.</p> <p>The icons in the Status bar indicate which kind of data network you're connected to and the voice and data network signal strength.</p> <table border="1"> <tr> <td></td><td>Connected to the fastest 3G networks (UMTS or HSDPA)</td></tr> <tr> <td></td><td>Connected to the second-fastest network (EDGE)</td></tr> <tr> <td></td><td>Connected to a 2G network (GPRS)</td></tr> <tr> <td></td><td>The more bars are lit, the stronger the wireless signal</td></tr> <tr> <td></td><td>Connected to another wireless service provider's network (roaming)</td></tr> </table> <p>When you're connected to slower networks, you may want to postpone using your phone for data-intensive tasks until you are connected to a faster network again, or find a Wi-Fi network to connect to. See "Connecting to Wi-Fi networks" on page 68.</p> <p>To determine what network you're using</p> <ol style="list-style-type: none"> 1 Press Home , press Menu , and touch Settings to open the Settings application. 2 Touch Wireless & networks > Mobile networks > Access Point Names. The name of the wireless service provider you're currently registered with is selected in the list. 		Connected to the fastest 3G networks (UMTS or HSDPA)		Connected to the second-fastest network (EDGE)		Connected to a 2G network (GPRS)		The more bars are lit, the stronger the wireless signal		Connected to another wireless service provider's network (roaming)
	Connected to the fastest 3G networks (UMTS or HSDPA)										
	Connected to the second-fastest network (EDGE)										
	Connected to a 2G network (GPRS)										
	The more bars are lit, the stronger the wireless signal										
	Connected to another wireless service provider's network (roaming)										

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

'455 Claims	Android Device with One or More Apps
	<p>To disable data when roaming</p> <p>You can prevent your phone from transmitting data over other carriers' mobile networks when you leave an area that is covered by your carrier's networks. This is useful for controlling expenses if your cell plan doesn't include data roaming.</p> <ol style="list-style-type: none"> 1 Press Home , press Menu , and touch Settings, to open the Settings application. 2 Touch Wireless & networks > Mobile networks and uncheck Data roaming. <p>With Data roaming unchecked, you can still transmit data with a Wi-Fi connection. See "Connecting to Wi-Fi networks" on page 68.</p> <p>To limit your data connection to 2G networks</p> <p>You can extend your battery life by limiting your data connections to 2G networks (GPRS or EDGE). When you are connected to a 2G network, you may want to postpone activities that transmit a lot of data, such as sending, uploading, or downloading pictures or video, until you are connected to a faster mobile or other wireless network.</p> <ol style="list-style-type: none"> 1 Press Home , press Menu , and touch Settings to open the Settings application. 2 Touch Wireless & networks > Mobile networks and check Use only 2G networks. <p>To edit or create a new access point</p> <p>If you and your wireless service provider determine that you need to change the settings of your current access point name (APN) or to create a new one, you must obtain the APN and detailed settings from your provider.</p> <ol style="list-style-type: none"> 1 Press Home , press Menu , and touch Settings to open the Settings application. 2 Touch Wireless & networks > Mobile networks > Access Point Names. 3 Touch an existing APN to edit it. Or press Menu  and touch New APN. Enter the APN settings that you obtained from your wireless service provider by touching each setting that you need to edit. 4 When you're finished, press Menu  and touch Save. 5 If you created a new APN, touch it in the APNs screen to start using it.

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'455 Claims	Android Device with One or More Apps				
	<p>Connecting to Wi-Fi networks</p> <p>Wi-Fi is a wireless networking technology that can provide Internet access at distances of up to 100 meters, depending on the Wi-Fi router and your surroundings.</p> <p>To use Wi-Fi on your phone, you access a wireless access point, or "hotspot." Some access points are open and you can simply connect to them. Others are hidden or implement other security features, so you must configure your phone so it can connect to them.</p> <p>There are numerous systems for securing Wi-Fi connections, including some that rely on secure certificates or other schemes to ensure that only authorized users can connect. For information about installing secure certificates, see "Working with secure certificates" on page 78.</p> <p>Turn off Wi-Fi when you're not using it, to extend the life of your battery.</p> <p>The Status bar displays icons that indicate Wi-Fi status.</p> <table border="1"> <tr> <td></td><td>Connected to a Wi-Fi network (waves indicate connection strength)</td></tr> <tr> <td></td><td>Notification that an open Wi-Fi network is in range</td></tr> </table> <p>When you connect to a Wi-Fi network, the phone obtains a network address and other information it needs from the network, using the DHCP protocol. To configure the phone with a fixed IP address and other advanced settings, press Menu  and touch Advanced. See "Advanced Wi-Fi settings screen" on page 310.</p> <p>To turn Wi-Fi on and connect to a Wi-Fi network</p> <p>If you're adding a Wi-Fi network when first setting up your phone, Wi-Fi is turned on automatically, so you can skip to step 4.</p> <ol style="list-style-type: none"> <li>1 Press Home , press Menu , and touch Settings. <li>2 Touch Wireless & networks > Wi-Fi settings. 		Connected to a Wi-Fi network (waves indicate connection strength)		Notification that an open Wi-Fi network is in range
	Connected to a Wi-Fi network (waves indicate connection strength)				
	Notification that an open Wi-Fi network is in range				
[1e] classify, as a second classification, whether a	Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:				

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

'455 Claims	Android Device with One or More Apps
<p>particular application associated with an Internet service access request, and capable of both interacting with a user in a user interface foreground of the device, and at least some Internet service activities when not interacting with a user in the device user interface foreground, is interacting with the user in the device user interface foreground, and</p>	<p><i>See, e.g.</i>, the disclosures identified for claims [1d].</p> <p><i>See, e.g.</i>, SAMSUNG_PRIORART0000001 (Nexus) at 115-117:</p> <p>Configuring account sync and display options</p> <p>You can configure background data use and synchronization options for all of the applications on your phone. You can also configure what kinds of data you synchronize for each account. Some applications, such as Gmail and Calendar, have their own synchronization settings.</p> <p>Some applications, such as Contacts and Gmail, can sync data from multiple applications. Others, such as Calendar, sync data only from the first Google Account you sign into on your phone, or from an account associated specifically with that application.</p> <p>For some accounts, syncing is two-directional; changes that you make to the information on your phone are made to the copy of that information on the web. Your Google Account works this way. Other accounts support only one-way sync; the information on your phone is read-only.</p> <p>You can use the Contacts display options to configure the kinds of contacts that are displayed, as described in "Changing which contacts are displayed" on page 106.</p> <p>To configure general sync settings</p> <p>1 Open the Accounts & Sync Settings screen.</p> <p>You can do this in Contacts by pressing Menu  and touching Accounts, or directly in the Settings application (press Home , press Menu , and touch Settings).</p>

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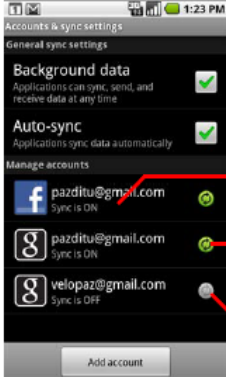


'455 Claims	Android Device with One or More Apps
	<p>The screen displays your current sync settings and a list of your current accounts.</p>  <p>Touch the account to configure.</p> <p>Some or all information from this account is configured to sync automatically with your phone.</p> <p>No information from this account syncs automatically with your phone.</p> <p> indicates that some or all of an account's information is configured to sync automatically with your phone.</p> <p> indicates that none of an account's information is configured to sync automatically with your phone.</p> <ol style="list-style-type: none"> Check or uncheck Background data to control whether applications and services can transmit data when you are not working with them directly (that is, when they are running in the background). If you uncheck this option, Gmail stops receiving new mail, Calendar stops syncing events, and so on, until you touch the Refresh menu item or send an email. Check or uncheck Auto-sync to control whether changes you make to information on the phone or on the web are automatically synced with each other. For example, when this option is checked, changes that you make in Contacts on the phone are automatically made in Google Contacts on the web. If you uncheck this option, you may be able to use an application's tools to sync data manually. See "To sync information manually" on page 117.

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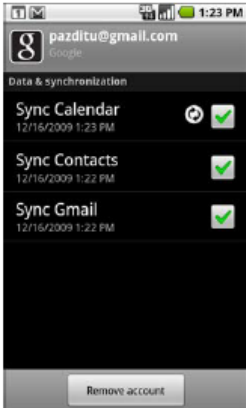
'455 Claims	Android Device with One or More Apps
	<p>To sync information manually</p> <ol style="list-style-type: none"> 1 Open the Accounts & Sync Settings screen. 2 Touch the account whose data you want to sync. 3 Press Menu  and touch Sync now. <p>To change an account's sync settings</p> <ol style="list-style-type: none"> 1 Open the Accounts & Sync Settings screen. 2 Touch the account whose sync settings you want to change. <p>The Data and Synchronization screen opens, displaying a list of the kinds of information the account can sync.</p> <p>Checked items are configured to sync to your phone.</p>  <ol style="list-style-type: none"> 3 Check or uncheck the kinds of information you want to sync to the phone. <p>Unchecking an option does not remove the information from your phone; it simply stops it from syncing automatically. To remove the information previously synced for the account, you must remove the account.</p> <p><i>See, e.g., SAMSUNG_PRIORART0000001 (Nexus) at 218:</i></p>

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'455 Claims	Android Device with One or More Apps
	<p>Open in background Check to open new windows in the background when you touch & hold a link and touch Open in new window. This is useful when you are working with windows that take a long time to download and display. Press Menu ☰, touch Windows, and then touch the new window to view it. Uncheck if you prefer new windows that you open in this way to open in place of the current window. See "To switch Browser windows" on page 213.</p> <p>Set home page Opens a dialog where you can enter the URL of a page that you want to open whenever you open a new Browser window. If you prefer to open new Browser windows more quickly, by not opening any page by default, leave the dialog blank.</p> <p><i>See, e.g., SAMSUNG_PRIORART0000001 (Nexus) at 286:</i></p> <p>Refresh settings</p> <p>These settings control how frequently the information on the News & Weather widget is updated. In addition to using these settings, adding or removing the News & Weather widget from the Home screen also turns Auto-refresh on or off. For more about working with widgets, see "Customizing the Home screen" on page 58.</p> <p>Auto-refresh Check to have News & Weather update information automatically, at the frequency you set with Refresh interval. Uncheck to update the news and weather only when you press Menu ☰ and touch Refresh. For automatic refresh to work, you must also have Background Data turned on in the Settings application. See "Accounts & sync settings" on page 320.</p> <p><i>See, e.g., SAMSUNG_PRIORART0000001 (Nexus) at 320:</i></p>

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
'455 Claims	Android Device with One or More Apps
	<p>Accounts & sync settings</p> <p>Use the Accounts & Sync settings to add, remove, and manage your Google and other supported accounts. You also use these settings to control how and whether all applications send, receive, and sync data on their own schedules, and whether all applications can synchronize user data automatically.</p> <p>Gmail, Calendar, and other applications may also have their own settings to control how they synchronize data; see the sections on those applications for details.</p> <p>Accounts & sync settings screen</p> <p>Background data Check to permit applications to synchronize data in the background, whether or not you are actively working in them. Unchecking this setting can save battery power and lowers (but does not eliminate) data use.</p> <p>Auto-sync Check to permit applications to synchronize data on their own schedule. If you uncheck this setting, you must touch an account in the list on this screen, press Menu , and touch Sync now to synchronize data for that account. Synchronizing data automatically is disabled if Background data is unchecked. In that case, the Auto-sync checkbox is dimmed.</p> <p>Manage accounts The rest of this screen lists the Google Accounts and other accounts you've added to the phone. Adding accounts is described in "Accounts" on page 111.</p> <p>If you touch an account in this screen, its account screen opens.</p>
[1f] apply a differential traffic control policy to the Internet service access request, based	Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:

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'455 Claims	Android Device with One or More Apps
<p>on (i) the first and second classifications performed by the one or more processors, and (ii) a differential traffic control policy list distinguishing between a first one or more applications resident on the device and a second one or more applications resident on the device,</p>	<p><i>See, e.g.</i>, the disclosures identified for claims [1d] - [1e].</p> <p><u>JuiceDefender App</u></p> <p>SAMSUNG_PRIORART0000379 (Latedroid):</p> <div> <h2>JuiceDefender</h2> </div> <div> </div> <div> <p>JuiceDefender saves battery power (<i>lots of it!</i>) by controlling the device data connection and/or WiFi.</p> </div> <div> <p>You can schedule regular APN/WiFi activation to let background data sync occur and have APN/WiFi enabled while the screen is on. It also helps in minimizing distractions ;)</p> </div> <div> </div> <div> <p>The <i>Easy Mode</i> is a no-fuss one-click way to let your battery last longer - much longer. Just enable JuiceDefender by clicking on the big button and you're ready to go!</p> </div> <div> <p>If you want more fine-grained control, try <i>Advanced Mode</i>, where you can configure all</p> </div> <p>JuiceDefender features to your liking.</p>

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'455 Claims	Android Device with One or More Apps
	<p>There are 5 <i>triggers</i> for the enable/disable behaviour:</p> <p>Battery - when battery level gets low (less than 15%), disable APN/WiFi, and re-enable them when battery level is restored. APN/WiFi will also be enabled while the device is being recharged.</p> <p>Schedule - regularly enable APN/WiFi for a short period of time, to <i>let background data sync</i> occur (email, Twitter, Facebook, stock quotes...). If <i>Quick</i> is disabled APN/WiFi stays enabled for a longer period, useful if your data connection is very slow or you need to sync lots of data.</p> <p>Night schedule (requires <i>UltimateJuice</i>) - disable APN/WiFi during night time; you can also optionally put the phone in Silent Mode.</p> <p>Screen - enable APN/WiFi <i>while the screen is on</i> to allow browsing, tweeting, procrastination and general internet-powered enjoyment, regardless of scheduled events and battery level.</p> <p>Location (requires <i>UltimateJuice</i>) - this trigger controlled by the '<i>AutoWiFi</i>' button. It disables WiFi when the device is not in range of any known WiFi network. The location is determined via the cellular network, so it's usually quite coarse. It's a fully automatic set-it-and-forget-it WiFi manager!</p> <p>The <i>priority order</i> of the triggers is 1) location (WiFi only), 2) screen, 3) battery, 4) night schedule, 5) schedule - this means, for example, that when the screen is on APN/WiFi will be enabled even when the battery is low, or that the regular schedule won't occur during the night period.</p> <p>SAMSUNG_PRIORART0000361 (Purdy):</p>

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'455 Claims	Android Device with One or More Apps
	<div> </div> <div> <p>Android: Most phones don't make it easy to switch cellular data connection on and off, even if doing so really helps save your battery. JuiceDefender toggles wireless data and Wi-Fi on and off every so often to preserve power.</p> </div> <div> <p>The whole point of a smartphone with Google apps baked in is constant connectivity, of course, and you don't want to shut off access to your email, Google Voice messages, and other online services. But when you're walking around, at your office desk, and generally not actively using your phone, you probably don't need your phone to check in every minute with the mothership. JuiceDefender lets you set a time interval—5 minutes, 15, 30, an hour, two hours—at which its background process will re-enable your carrier APN, see if there are new messages or data coming in, and then shut off again. You can also set similar Wi-Fi connectivity rules, or only have web data enabled when you've got your screen on. Besides the battery savings,</p> </div> <div> <p>those who like to parse out their email checks and avoid minute-by-minute distractions see some benefit here, too.</p> </div> <div> <p>SAMSUNG_PRIORART0000379 (Latedroid):</p> </div>

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'455 Claims	Android Device with One or More Apps
	<div><p>The screenshot displays the 'Juice Control' app interface. At the top, there's a title 'Juice Control'. Below it, a row of five green buttons: 'Enabled', '3G APN', 'MMS', 'WiFi', and 'AutoWiFi'. The '3G APN' button has a red 'X' icon. Below this row is a section titled 'Triggers' with four green buttons: 'Screen', 'Battery', 'Schedule', and 'Night'. Under 'Triggers', there are four lines of text: 'Location: Disable WiFi when far from known networks', 'Screen: Enable APN+WiFi when screen on', 'Battery: Disable APN+WiFi when battery low', and 'Night: Disable APN+WiFi from 22:00 to 06:00'. Below this is a horizontal slider bar with a yellow segment on the left and a grey segment on the right. At the bottom, there's a 'Schedule' section with the text 'Enable APN+WiFi 1m every 5m' and a row of buttons: '5m', '15m', '30m', '1h', '2h', and a 'Quick' button with a red circular arrow icon.</p></div> <p>SAMSUNG_PRIORART0000361 (Purdy):</p>

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'455 Claims	Android Device with One or More Apps
	<div><p>The screenshot displays the 'Juice Control' app interface. At the top, there's a title 'Juice Control' and a row of five green buttons: 'Enabled', '3G APN', 'MMS', 'WiFi', and 'AutoWiFi'. Below this is a 'Triggers' section with four green buttons: 'Screen', 'Battery', 'Schedule', and 'Night'. Underneath the triggers, there are four lines of text: 'Location Disable WiFi when far from known networks', 'Screen Enable APN+MMS when screen on', 'Battery Disable APN+MMS when battery low', and 'Night Disable APN+MMS from 10pm to 6:30am'. Below the text is a horizontal slider bar with a yellow segment on the left and a grey segment on the right, followed by a 'Sil' button. At the bottom, there's a 'Schedule' section with the text 'Enable APN+MMS 2m every 15m' and a row of buttons: '5m', '15m' (highlighted), '30m', '1h', '2h', and a 'Quick' button.</p></div> <p>SAMSUNG_PRIORART0000351 (Configuration-Translated):</p>

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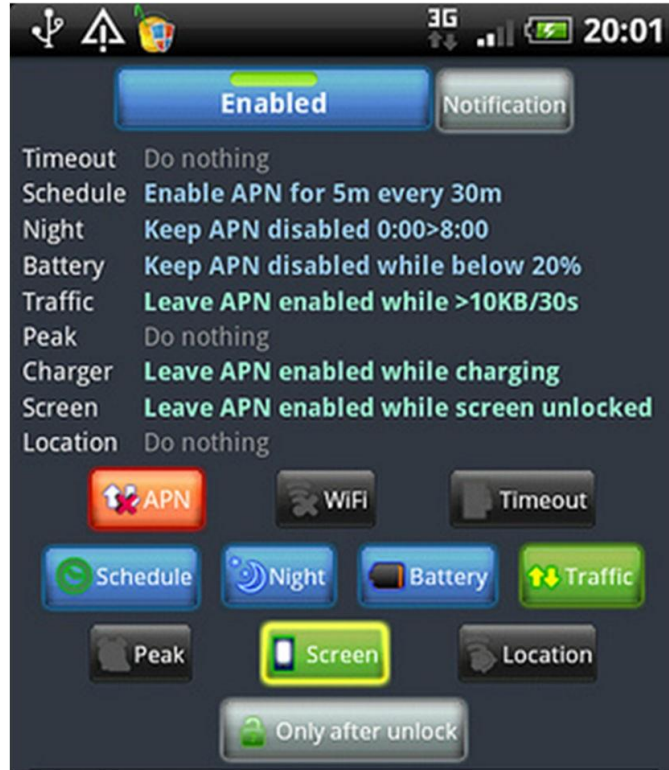
'455 Claims	Android Device with One or More Apps
	<div></div> <p>HW_PRIOR_ART00002319 (Ruddock):</p>

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'455 Claims	Android Device with One or More Apps
	<div> </div> <p><u>GreenPower App</u></p>

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'455 Claims	Android Device with One or More Apps
	<p>POUZERATE0000196 (GreenPower User Guide) ("Manage Wifi If this setting is selected, then Green Power will regularly turn on and off the Wifi connection, based on the durations specified in the settings below.</p> <p>If this setting is not selected, then Green Power will leave the Wifi as it is, never turning it on or off.</p> <p>Please note that if you manually switches off the Wifi, then Green Power will unselect the "Manage Wifi" setting in order not to automatically switch on the Wifi again despite your manual action. Then, if you switch back on the Wifi or reselect "Manage Wifi" setting, Green Power will resume managing Wifi connection.</p> <p>Manage Mobile Network If this setting is selected, then Green Power will regularly turn on and off the Mobile Network connection, based on the durations specified in the settings below.</p> <p>If this setting is not selected, then Green Power will leave the Mobile Network as it is, never turning it on or off.</p> <p>Please note that in order for Green Power to turn on / off Mobile Network, this one has to be manually enabled by the user first in the phone settings (Wireless & networks → Mobile Network) or in Green Power settings (Global wireless settings → Mobile Network) . Green Power can't itself turn on Mobile Network as this is a limitation of the Android system for security and cost reasons.").</p>
[1g] such that, when the particular application is one of the first one or more applications, the one or more processors are operable to	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g., the disclosures identified for claims [1d] - [1f].</i></p>

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'455 Claims	Android Device with One or More Apps
<p>block the Internet service access request in a first state of the first and second classifications, wherein data for Internet service activities is classified as to be provided through the WWAN modem, and the particular application is not classified as interacting with a user in the device user interface foreground, and allow the Internet service access request under at least one different state of the first and second classifications.</p>	
<p>[2] The wireless end-user device of claim 1, wherein the one or more processors are configured to classify that the particular application is interacting with the user in the device user interface foreground when the user of the device is directly interacting with that application or perceiving any benefit from that application.</p>	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g.,</i> the disclosures identified for claims [1 pre] - [1g].</p>

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'455 Claims	Android Device with One or More Apps
<p>[3] The wireless end-user device of claim 1, further comprising the user interface, wherein the user interface is to provide the user of the device with information regarding why the differential traffic control policy is applied to the particular end-user application.</p>	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g.,</i> the disclosures identified for claims [1 pre] - [1g].</p>
<p>[4] The wireless end-user device of claim 1, further comprising the user interface, wherein the user interface is to inform a user of the wireless end-user device when there are options to set, control, override, or modify service usage controls that affect the differential traffic control policy and/or the differential traffic control policy list.</p>	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g.,</i> the disclosures identified for claims [1 pre] - [1g].</p>
<p>[5] The wireless end-user device of claim 1, wherein the differential traffic control policy is part of a multimode profile having different policies for different networks.</p>	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g.,</i> the disclosures identified for claims [1 pre] - [1g].</p>

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'455 Claims	Android Device with One or More Apps
[6] The wireless end-user device of claim 5, wherein the one or more processors are further configured to select a traffic control policy from the multimode profile based at least in part on a network type of a network connection currently in use by the wireless end-user device.	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g.,</i> the disclosures identified for claims [1 pre] - [1g].</p>
[7] The wireless end-user device of claim 6, wherein the one or more processors are further configured to, when the network type of a network connection is at least one type of WLAN connection, select a traffic control policy from the multimode profile based at least in part on a type of network connection from the WLAN to the Internet.	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g.,</i> the disclosures identified for claims [1 pre] - [1g].</p>
[8] The wireless end-user device of claim 1, wherein the one or more processors are further to apply the differential traffic control policy such that, when the particular application	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g.,</i> the disclosures identified for claims [1 pre] - [1g].</p>

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'455 Claims	Android Device with One or More Apps
is one of the second one or more applications, the one or more processors are operable to allow the Internet service access request when data for Internet service activities is classified as to be provided through the WWAN modem, and the particular application is not classified as interacting with a user in the device user interface foreground.	
[9]. The wireless end-user device of claim 1, wherein the one or more processors are to apply the differential traffic control policy to one of but not both of a WWAN modem connection to a roaming WWAN network and a WWAN modem connection to a home WWAN network.	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g.,</i> the disclosures identified for claims [1 pre] - [1g].</p>
[10] The wireless end-user device of claim 1, wherein the one or more processors are further configured to dynamically change the application of the differential	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g.,</i> the disclosures identified for claims [1 pre] - [1g].</p>

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'455 Claims	Android Device with One or More Apps
traffic control policy based on a power state of the device.	
[11] The wireless end-user device of claim 1, wherein the one or more processors are further configured to dynamically change the application of the differential traffic control policy based on a device usage state.	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g.,</i> the disclosures identified for claims [1 pre] - [1g].</p>
[12] The wireless end-user device of claim 1, wherein the one or more processors are further configured to dynamically change the application of the differential traffic control policy based on power control state changes for one or more of the modems.	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g.,</i> the disclosures identified for claims [1 pre] - [1g].</p>
[13] The wireless end-user device of claim 1, wherein the differential traffic control policy defines that the first one or more applications can only have WWAN network access	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g.,</i> the disclosures identified for claims [1 pre] - [1g].</p>

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'455 Claims	Android Device with One or More Apps
events during particular time windows.	
[14] The wireless end-user device of claim 1, wherein the one or more processors are further configured to update the differential traffic control policy and/or the differential traffic control policy list based on information received from a network element.	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g.</i>, the disclosures identified for claims [1 pre] - [1g].</p>
[15] The wireless end-user device of claim 1, further comprising an agent to block, modify, remove, or replace user interface messages generated by the particular application based on the applied differential traffic control policy.	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g.</i>, the disclosures identified for claims [1 pre] - [1g].</p>
[16] The wireless end-user device of claim 1, wherein the one or more processors operable to block the Internet service access request are configured to selectively block the Internet service access	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g.</i>, the disclosures identified for claims [1 pre] - [1g].</p>

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'455 Claims	Android Device with One or More Apps
request by intercepting open, connect, and/or write requests by the particular application to a network stack.	
[17] The wireless end-user device of claim 16, wherein the one or more processors are configured to respond to an intercepted request by the particular application by emulating network messaging.	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g.</i>, the disclosures identified for claims [1 pre] - [1g].</p>
[18] The wireless end-user device of claim 17, wherein emulating network messaging comprises responding to a network request from the particular application by blocking the request from passing to a network stack and returning to the particular application a message indicating the network request was not successful.	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g.</i>, the disclosures identified for claims [1 pre] - [1g].</p>
[19] The wireless end-user device of claim 1, wherein the one or more processors are configured to classify that the	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g.</i>, the disclosures identified for claims [1 pre] - [1g].</p>

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'455 Claims	Android Device with One or More Apps
particular application is interacting with a user in the device user interface foreground based on a state of user interface priority for the application.	
[20] The wireless end-user device of claim 1, wherein the second one or more applications are not subject to a differential network access control that is applicable to the first one or more applications.	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g.</i>, the disclosures identified for claims [1 pre] - [1g].</p>
[22] The wireless end-user device of claim 1, wherein the one or more processors are further configured to classify between: user applications; system applications, utilities, functions, or processes; and operating system application, utilities, functions, or processes.	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g.</i>, the disclosures identified for claims [1 pre] - [1g].</p>
[23] The wireless end-user device of claim 1, wherein the second one or more	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g.</i>, the disclosures identified for claims [1 pre] - [1g].</p>

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'455 Claims	Android Device with One or More Apps
applications comprises foreground services.	
[24] The wireless end-user device of claim 1, wherein block comprises intermittently block when the Internet service access request occurs during selected time windows.	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g.</i>, the disclosures identified for claims [1 pre] - [1g].</p>
[25] The wireless end-user device of claim 1, wherein the one or more processors are configured to prevent the first one or more applications from changing the power state of the modem, and to not prevent the second one or more applications from changing the power state of the modem.	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g.</i>, the disclosures identified for claims [1 pre] - [1g].</p>
[26] The wireless end-user device of claim 1, wherein the at least one different classification state comprises a state wherein data for Internet service activities is classified as to be provided through the WWAN modem, and the particular application is	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g.</i>, the disclosures identified for claims [1 pre] - [1g].</p>

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'455 Claims	Android Device with One or More Apps
classified as interacting with a user in the device user interface foreground.	

Exhibit E-10 to Defendants' Invalidity Contentions
U.S. Patent No. 11,405,224

Exhibit E-10

Based on Headwater's apparent positions as to the scope of the patent's claims, as best they can be deciphered, the reference(s) charted below anticipate(s) or at least render(s) obvious the identified claims. The portions of the prior art reference cited below are not exhaustive but are exemplary in nature.

This disclosure is not an admission that Samsung concedes any claim construction implied or suggested by Headwater's apparent positions as to the scope of the patent's claims, nor is it an admission by Samsung that any of its products are covered by or infringe the patent's claims, particularly when they are properly construed and applied. Samsung is not taking any claim construction positions through this disclosure, including whether the preamble is a limitation.

Samsung reserves the right to rely on additional citations or sources of evidence that also may be applicable, or that may become applicable in light of claim construction, changes in Headwater's infringement contentions, and/or information obtained during discovery as the case progresses. Samsung further reserves the right to amend or supplement this claim chart at a later date as more fully set forth in the Invalidity Contentions. For example, Defendants are currently in the process of taking discovery from non-parties including Nokia, HMD, Citrix, Google, Apple, and Microsoft. Accordingly, Defendants reserve the right to modify, amend, and/or supplement these contentions as information becomes available from non-parties.

Android is mobile device operating system that was initially released in September 2008. Applications (or "apps") can be installed on mobile devices that run Android. Any mobile device that predates the '224 patent, running an Android version with one or more apps that also predate the '224 patent, qualifies as prior art under at least pre-AIA 35 U.S.C. §§ 102(a)/(b). Such a device was known, used, offered for sale, and/or sold in the United States before the '224 patent.

Exemplary mobile devices that predate the '224 patent include:

- HTC Dream/T-Mobile G1 (released September 2008)
- Nexus One (released January 2010)

Exemplary Android versions that predate the '224 patent include: ¹

¹ See, e.g., SAMSUNG_PRIORART0003998; SAMSUNG_PRIORART0004085; SAMSUNG_PRIORART0004081; SAMSUNG_PRIORART0004086; SAMSUNG_PRIORART0004083; SAMSUNG_PRIORART0004084.

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- Android 1.0 (released September 2008)
- Android 1.1 (released February 2009)
- Android Cupcake (1.5) (released April 2009)
- Android Donut (1.6) (released September 2009)
- Android Eclair (2.0, 2.0.1, 2.1) (released October 2009 - January 2010)
- Android Froyo (2.2) (released May 20, 2010)

Exemplary apps that predate the '224 patent include:²

- JuiceDefender (released January 2010) and its associated add-on application, UltimateJuice (collectively "JuiceDefender App")
- GreenPower (released March 2010)

As a specific example, a Nexus One mobile device running Android Froyo 2.2 with the JuiceDefender application installed qualifies as prior art under at least pre-AIA 35 U.S.C. §§ 102(a)/(b). This device was known, used, offered for sale, and/or sold in the United States on or before May 20, 2010. At least the various documents cited in this claim chart describe the functionality of this device.

To the extent it is argued that Android Device with One or More Apps does not disclose or include each and every asserted claim limitation, either expressly or inherently, it would have been obvious to a POSITA to incorporate any of the teachings from the references identified in Exhibits E-01 through E-11, and E-E (whose exemplary citations for each limitation are incorporated herein) into Android Device with One or More Apps. Indeed, it would have been obvious to make such combinations and a POSITA would have had reason and motivation to make such combinations at least for reasons described herein and in the cover pleading.

'224 Claims	Android Device with One or More Apps
[1 pre] A wireless end-user communications device, comprising:	To the extent the preamble is a limitation, Android Device with One or More Apps discloses and/or renders obvious this element. For example, see the following passages and/or figures, as well as related disclosures:

² See, e.g., SAMSUNG_PRIORART0000335-SAMSUNG_PRIORART0000383; POUZERATE0000001-POUZERATE0000261.

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'224 Claims	Android Device with One or More Apps
	<p><u>Nexus One</u> The Nexus One is an example of an Android smartphone.</p> <p><i>See, e.g., SAMSUNG_PRIORART0000001 (Nexus) at 17:</i></p> <div> <p style="text-align: center;">Getting to know your phone</p> </div> <p><u>JuiceDefender App</u></p> <p>JuiceDefender is a mobile application (or “app”) intended to run on a mobile device, such an Android smartphone. The Nexus One is an example of an Android smartphone capable of running JuiceDefender.</p> <p>SAMSUNG_PRIORART0000379 (Latedroid) (“JuiceDefender saves battery power (lots of it!)”)</p>

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'224 Claims	Android Device with One or More Apps
	<p>by controlling the device data connection and/or WiFi ... You can schedule regular APN/WiFi activation to let background data sync occur and have APN/WiFi enabled while the screen is on. It also helps in minimizing distractions.”)</p> <p>SAMSUNG_PRIORART0000361 (Purdy) (“Android: Most phones don't make it easy to switch cellular data connection on and off, even if doing so really helps save your battery. JuiceDefender toggles wireless data and Wi-Fi on and off every so often to preserve power.”)</p> <p><u>GreenPower App</u></p> <p>GreenPower is a mobile application (or “app”) intended to run on a mobile device, such an Android smartphone. The Nexus One is an example of an Android smartphone capable of running GreenPower.</p> <p><i>See, e.g.</i>, POUZERATE00000015 (GDG Oslo) at 5:</p>

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'224 Claims	Android Device with One or More Apps
	<div><h2>Background</h2><ul style="list-style-type: none">History of GreenPower app<ul style="list-style-type: none">2010: My first HTC heroMarch 2010: First Free version publishedOctober 2010: First Paid version publishedJan 2013:<ul style="list-style-type: none">1.3M downloads Free (>2500/day)200.000 active users<div><p>23.01.2013 - GDG Oslo - 5/35</p></div><p><i>See, e.g.,</i> POUZERATE0000002 (App Circus) at 9:</p></div>

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'224 Claims	Android Device with One or More Apps
	<p>Be mainstream</p> <ul style="list-style-type: none"> ▶ Cross Android versions <ul style="list-style-type: none"> ◦ Froyo ◦ Gingerbread ◦ Honeycomb ◦ Ice cream sandwich (as soon as someone offers me a Galaxy Nexus) ▶ Cross technologies <ul style="list-style-type: none"> ◦ GSM ◦ CDMA ◦ 2G, 3G, LTE ▶ 18 languages (not everybody speaks English, I know, I'm French) 
[1a] at least one wireless modem;	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><u>Nexus One</u></p> <p><i>See, e.g., SAMSUNG_PRIORART0000001 (Nexus) at 332:</i></p>

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'224 Claims	Android Device with One or More Apps		
	<table border="1"> <tr> <td>Cellular & wireless</td><td> <p>Nexus One GSM phones compatible with 3G mobile networks from AT&T (U.S.) and Rogers Wireless (Canada): 3G UMTS bands I/II/V: 2100, 1900, 850 MHz</p> <p>Nexus One GSM phones compatible with 3G mobile networks from T-Mobile (U.S.): 3G UMTS bands I/IV/VIII: 2100, 1700(AWS), 900 MHz</p> <p>All Nexus One GSM phones: HSDPA 7.2Mbps HSUPA 2Mbps GSM/EDGE 850, 900, 1800, 1900 MHz Wi-Fi 802.11b/g Bluetooth 2.1 + EDR A2DP stereo Bluetooth</p> </td></tr> </table> <p>SAMSUNG_PRIORART0000001 (Nexus) at 320:</p> <p>Accounts & sync settings screen</p> <p>Background data Check to permit applications to synchronize data in the background, whether or not you are actively working in them. Unchecking this setting can save battery power and lowers (but does not eliminate) data use.</p> <p>Auto-sync Check to permit applications to synchronize data on their own schedule. If you uncheck this setting, you must touch an account in the list on this screen, press Menu ☰, and touch Sync now to synchronize data for that account. Synchronizing data automatically is disabled if Background data is unchecked. In that case, the Auto-sync checkbox is dimmed.</p>	Cellular & wireless	<p>Nexus One GSM phones compatible with 3G mobile networks from AT&T (U.S.) and Rogers Wireless (Canada): 3G UMTS bands I/II/V: 2100, 1900, 850 MHz</p> <p>Nexus One GSM phones compatible with 3G mobile networks from T-Mobile (U.S.): 3G UMTS bands I/IV/VIII: 2100, 1700(AWS), 900 MHz</p> <p>All Nexus One GSM phones: HSDPA 7.2Mbps HSUPA 2Mbps GSM/EDGE 850, 900, 1800, 1900 MHz Wi-Fi 802.11b/g Bluetooth 2.1 + EDR A2DP stereo Bluetooth</p>
Cellular & wireless	<p>Nexus One GSM phones compatible with 3G mobile networks from AT&T (U.S.) and Rogers Wireless (Canada): 3G UMTS bands I/II/V: 2100, 1900, 850 MHz</p> <p>Nexus One GSM phones compatible with 3G mobile networks from T-Mobile (U.S.): 3G UMTS bands I/IV/VIII: 2100, 1700(AWS), 900 MHz</p> <p>All Nexus One GSM phones: HSDPA 7.2Mbps HSUPA 2Mbps GSM/EDGE 850, 900, 1800, 1900 MHz Wi-Fi 802.11b/g Bluetooth 2.1 + EDR A2DP stereo Bluetooth</p>		

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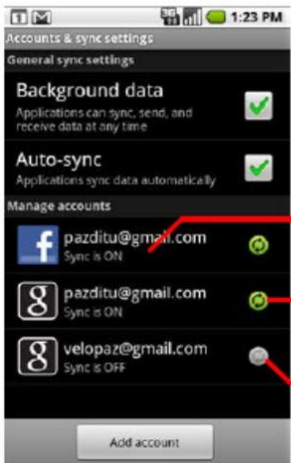


'224 Claims	Android Device with One or More Apps
	<p>SAMSUNG_PRIORART0000001 (Nexus) at 115-116 (“You can configure background data use and synchronization options for all of the applications on your phone. You can also configure what kinds of data you synchronize for each account. Some applications, such as Gmail and Calendar, have their own synchronization settings.”).</p> <p>SAMSUNG_PRIORART0000001 (Nexus) at 115-116: The screen displays your current sync settings and a list of your current accounts.</p>  <p>Touch the account to configure.</p> <p>Some or all information from this account is configured to sync automatically with your phone.</p> <p>No information from this account syncs automatically with your phone.</p> <p> indicates that some or all of an account's information is configured to sync automatically with your phone.</p> <p> indicates that none of an account's information is configured to sync automatically with your phone.</p> <p><u>JuiceDefender App</u></p> <p>SAMSUNG_PRIORART0000379 (Latedroid) (“JuiceDefender saves battery power (lots of it!) by controlling the device data connection and/or WiFi ... You can schedule regular APN/WiFi</p>

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'224 Claims	Android Device with One or More Apps
	<p>activation to let background data sync occur and have APN/WiFi enabled while the screen is on. It also helps in minimizing distractions.”).</p> <p>SAMSUNG_PRIORART0000351 (Configuration-Translated) (“APN: activates / deactivates the APN connection, in its submenu we find the MMS button that activated configures the reception of MMS in the same way that we have the APN and Prefer Wifi that activated will try to connect first to this and if to five seconds does not find an available network will activate the APN. WIFI: activates / deactivates the WIFI connection, in its submenu we find the following buttons, Auto Disable turns off the wifi in the case of not finding a network available to save battery, in case it is deactivated we will have to activate it manually; Enable on Schedule / Peak / Screen will activate the wifi as we have configured those buttons that we will see below.”)</p> <p>SAMSUNG_PRIORART0000361 (Purdy) (“Android: Most phones don't make it easy to switch cellular data connection on and off, even if doing so really helps save your battery. JuiceDefender toggles wireless data and Wi-Fi on and off every so often to preserve power.”).</p> <p>SAMSUNG_PRIORART0000335 (Ruddock) (“Juice Defender is a battery conservation app. It uses various triggers, rules, and timers to control how often your device utilizes 3G/EDGE APN’s (data connections) as well as WiFi. These data connections are the number one drainers of battery life when your phone is idle, so Juice Defender allows you to decide when, where, and how often you want them to be active.”).</p> <p><u>GreenPower App</u></p> <p>POUZERATE0000196 (GreenPower User Guide) (“Manage Mobile Network If this setting is selected, then Green Power will regularly turn on and off the Mobile Network connection, based on the durations specified in the settings below.</p> <p>If this setting is not selected, then Green Power will leave the Mobile Network as it is, never turning it on or off.</p>

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'224 Claims	Android Device with One or More Apps		
	<p>Please note that in order for Green Power to turn on / off Mobile Network, this one has to be manually enabled by the user first in the phone settings (Wireless & networks → Mobile Network) or in Green Power settings (Global wireless settings → Mobile Network) . Green Power can't itself turn on Mobile Network as this is a limitation of the Android system for security and cost reasons.”).</p>		
[1b] a processor configured to	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g., SAMSUNG_PRIORART0000001 (Nexus) at 331:</i></p> <table border="1"> <tr> <td>Processor</td><td>Qualcomm QSD 8250, 1 GHz</td></tr> </table> <p><i>See, e.g., SAMSUNG_PRIORART0000001 (Nexus) at 320:</i></p> <p>Accounts & sync settings screen</p> <p>Background data Check to permit applications to synchronize data in the background, whether or not you are actively working in them. Unchecking this setting can save battery power and lowers (but does not eliminate) data use.</p> <p>Auto-sync Check to permit applications to synchronize data on their own schedule. If you uncheck this setting, you must touch an account in the list on this screen, press Menu ☰, and touch Sync now to synchronize data for that account. Synchronizing data automatically is disabled if Background data is unchecked. In that case, the Auto-sync checkbox is dimmed.</p>	Processor	Qualcomm QSD 8250, 1 GHz
Processor	Qualcomm QSD 8250, 1 GHz		

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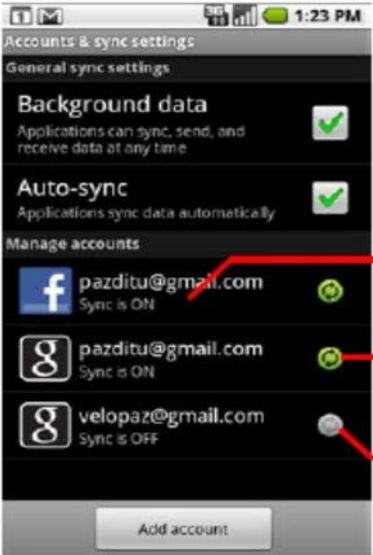


'224 Claims	Android Device with One or More Apps
	<p>SAMSUNG_PRIORART0000001 (Nexus) at 115-116 (“You can configure background data use and synchronization options for all of the applications on your phone. You can also configure what kinds of data you synchronize for each account. Some applications, such as Gmail and Calendar, have their own synchronization settings.”).</p> <p>SAMSUNG_PRIORART0000001 (Nexus) at 115-116: The screen displays your current sync settings and a list of your current accounts.</p>  <p>Touch the account to configure.</p> <p>Some or all information from this account is configured to sync automatically with your phone.</p> <p>No information from this account syncs automatically with your phone.</p> <p> indicates that some or all of an account's information is configured to sync automatically with your phone.</p> <p> indicates that none of an account's information is configured to sync automatically with your phone.</p>

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'224 Claims	Android Device with One or More Apps
[1c] for each given application of a plurality of applications on the wireless end-user device, monitor a network service usage activity of the wireless end-user communications device associated with the given application;	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g.,</i> the disclosures identified for claims [1b].</p>
[1d] classify, as a first classification for each given one of the network service usage activities, a classification based on the application associated with the given network service usage activity and that allows for a differential network access control, wherein the differential network access control comprises a set of service usage control policies applicable when a network service is available via the at least one wireless modem, including at least a first policy that allows the given network service usage activity to currently communicate data with a network destination via	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g.,</i> the disclosures identified for claims [1b].</p> <p><u>Nexus One</u></p> <p><i>See, e.g.,</i> SAMSUNG_PRIORART0000001 (Nexus) at 320:</p> <p>Accounts & sync settings screen</p> <p>Background data Check to permit applications to synchronize data in the background, whether or not you are actively working in them. Unchecking this setting can save battery power and lowers (but does not eliminate) data use.</p> <p>Auto-sync Check to permit applications to synchronize data on their own schedule. If you uncheck this setting, you must touch an account in the list on this screen, press Menu ☰, and touch Sync now to synchronize data for that account. Synchronizing data automatically is disabled if Background data is unchecked. In that case, the Auto-sync checkbox is dimmed.</p>

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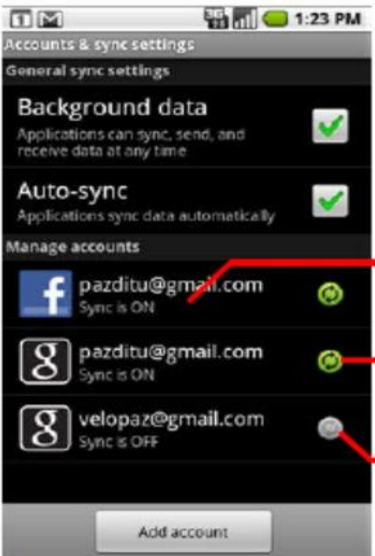


'224 Claims	Android Device with One or More Apps
<p>the at least one wireless modem, and a second policy that defers data communication associated with the given network service usage activity until a device state change occurs;</p>	<p>SAMSUNG_PRIORART0000001 (Nexus) at 115-116 (“You can configure background data use and synchronization options for all of the applications on your phone. You can also configure what kinds of data you synchronize for each account. Some applications, such as Gmail and Calendar, have their own synchronization settings.”).</p> <p>SAMSUNG_PRIORART0000001 (Nexus) at 115-116: The screen displays your current sync settings and a list of your current accounts.</p>  <p>Touch the account to configure.</p> <p>Some or all information from this account is configured to sync automatically with your phone.</p> <p>No information from this account syncs automatically with your phone.</p> <p> indicates that some or all of an account's information is configured to sync automatically with your phone.</p> <p> indicates that none of an account's information is configured to sync automatically with your phone.</p>

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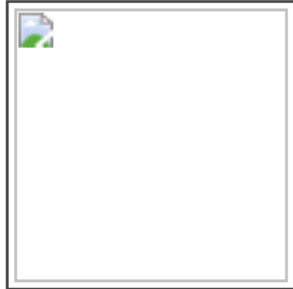
'224 Claims	Android Device with One or More Apps
	<p><u>JuiceDefender App</u></p> <p>SAMSUNG_PRIORART0000379 (Latedroid):</p> <div>  </div> <div>  </div> <p>JuiceDefender features to your liking.</p> <p>JuiceDefender saves battery power (<i>lots of it!</i>) by controlling the device data connection and/or WiFi.</p> <p>You can schedule regular APN/WiFi activation to let background data sync occur and have APN/WiFi enabled while the screen is on. It also helps in minimizing distractions ;)</p> <div>  </div> <p>The <i>Easy Mode</i> is a no-fuss one-click way to let your battery last longer - much longer. Just enable JuiceDefender by clicking on the big button and you're ready to go!</p> <p>If you want more fine-grained control, try <i>Advanced Mode</i>, where you can configure all</p>

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	<p>There are 5 <i>triggers</i> for the enable/disable behaviour:</p> <p>Battery - when battery level gets low (less than 15%), disable APN/WiFi, and re-enable them when battery level is restored. APN/WiFi will also be enabled while the device is being recharged.</p> <p>Schedule - regularly enable APN/WiFi for a short period of time, to <i>let background data sync</i> occur (email, Twitter, Facebook, stock quotes...). If <i>Quick</i> is disabled APN/WiFi stays enabled for a longer period, useful if your data connection is very slow or you need to sync lots of data.</p> <p>Night schedule (requires <i>UltimateJuice</i>) - disable APN/WiFi during night time; you can also optionally put the phone in Silent Mode.</p> <p>Screen - enable APN/WiFi <i>while the screen is on</i> to allow browsing, tweeting, procrastination and general internet-powered enjoyment, regardless of scheduled events and battery level.</p> <p>Location (requires <i>UltimateJuice</i>) - this trigger controlled by the <i>'AutoWiFi'</i> button. It disables WiFi when the device is not in range of any known WiFi network. The location is determined via the cellular network, so it's usually quite coarse. It's a fully automatic set-it-and-forget-it WiFi manager!</p> <p>The <i>priority order</i> of the triggers is 1) location (WiFi only), 2) screen, 3) battery, 4) night schedule, 5) schedule - this means, for example, that when the screen is on APN/WiFi will be enabled even when the battery is low, or that the regular schedule won't occur during the night period.</p> <p>SAMSUNG_PRIORART0000361 (Purdy):</p>

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'224 Claims	Android Device with One or More Apps
	<div> </div> <p>Android: Most phones don't make it easy to switch cellular data connection on and off, even if doing so really helps save your battery. JuiceDefender toggles wireless data and Wi-Fi on and off every so often to preserve power.</p> <p>The whole point of a smartphone with Google apps baked in is constant connectivity, of course, and you don't want to shut off access to your email, Google Voice messages, and other online services. But when you're walking around, at your office desk, and generally not actively using your phone, you probably don't need your phone to check in every minute with the mothership. JuiceDefender lets you set a time interval—5 minutes, 15, 30, an hour, two hours—at which its background process will re-enable your carrier APN, see if there are new messages or data coming in, and then shut off again. You can also set similar Wi-Fi connectivity rules, or only have web data enabled when you've got your screen on. Besides the battery savings, those who like to parse out their email checks and avoid minute-by-minute distractions see some benefit here, too.</p> <p>SAMSUNG_PRIORART0000379 (Latedroid):</p>

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'224 Claims	Android Device with One or More Apps
	<div></div> <p>SAMSUNG_PRIORART0000361 (Purdy):</p>

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'224 Claims	Android Device with One or More Apps
	<div> <p>The screenshot displays the Juice Control app interface. At the top, under the heading "Juice Control", there are four toggle buttons: "Enabled" (green), "APN" (red), "MMS" (green), "WiFi" (grey), and "AutoWiFi" (green). Below this, under the heading "Triggers", there are four toggle buttons: "Screen" (green), "Battery" (grey), "Schedule" (green), and "Night" (green). Under the "Location" trigger, the text reads "Disable WiFi when far from known networks". Under the "Screen" trigger, the text reads "Enable APN+MMS when screen on". Under the "Battery" trigger, the text reads "Disable APN+MMS when battery low". Under the "Night" trigger, the text reads "Disable APN+MMS from 10pm to 6:30am". Below the triggers, there is a volume slider and a "Sil" button. At the bottom, under the heading "Schedule", the text reads "Enable APN+MMS 2m every 15m". There are five buttons for the schedule: "5m", "15m" (selected), "30m", "1h", and "2h", along with a "Quick" button.</p> </div> <p>SAMSUNG_PRIORART0000351 (Configuration-Translated):</p>

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'224 Claims	Android Device with One or More Apps
	<div></div> <p>SAMSUNG_PRIORART0000335 (Ruddock):</p>

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'224 Claims	Android Device with One or More Apps
	<div> <p>The screenshot displays the GreenPower App interface. At the top, there's a status bar with a battery icon, signal strength, and the time 9:26 PM. Below the status bar, the app has a dark background with various settings. A blue 'Enabled' button is at the top left, and a grey 'Notification' button is at the top right. The settings list includes: Timeout (Do nothing), CPU (Do nothing), Schedule (Enable Data/WiFi for 1m every 15m), Night (Keep Data/WiFi disabled 1am>7am), Battery (Keep Data/WiFi disabled while below 15%), Traffic (Leave Data/WiFi enabled while >10KB/30s), Peak (Do nothing), Charger (Leave Data/WiFi enabled while charging), Screen (Leave Data/WiFi enabled while screen unlo), and Location (Do nothing). Below the list, there are buttons for Data (orange), 3G (grey), WiFi (red), Timeout (grey), CPU (grey), Schedule (blue), Night (blue), Battery (blue), Traffic (green), Peak (grey), Screen (green), Location (grey), and a 'Prefer WiFi' button at the bottom.</p> </div> <p><u>GreenPower App</u></p>

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'224 Claims	Android Device with One or More Apps
	<p>POUZERATE0000196 (GreenPower User Guide) (“Manage Wifi If this setting is selected, then Green Power will regularly turn on and off the Wifi connection, based on the durations specified in the settings below.</p> <p>If this setting is not selected, then Green Power will leave the Wifi as it is, never turning it on or off.</p> <p>Please note that if you manually switches off the Wifi, then Green Power will unselect the “Manage Wifi” setting in order not to automatically switch on the Wifi again despite your manual action. Then, if you switch back on the Wifi or reselect “Manage Wifi” setting, Green Power will resume managing Wifi connection.</p> <p>Manage Mobile Network If this setting is selected, then Green Power will regularly turn on and off the Mobile Network connection, based on the durations specified in the settings below.</p> <p>If this setting is not selected, then Green Power will leave the Mobile Network as it is, never turning it on or off.</p> <p>Please note that in order for Green Power to turn on / off Mobile Network, this one has to be manually enabled by the user first in the phone settings (Wireless & networks → Mobile Network) or in Green Power settings (Global wireless settings → Mobile Network) . Green Power can't itself turn on Mobile Network as this is a limitation of the Android system for security and cost reasons.”).</p> <p>POUZERATE0000196 (GreenPower User Guide) (“Global Wireless settings This is a shortcut to the phone system wireless settings where the user can find the setting “Mobile Network”. That one should be checked or Green Power won't be able to properly manage Mobile Network.</p>

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	<p>Screen off wireless delay This setting defines how long Green Power should wait before switching off wireless when the screen is turned off. Delaying turning off wireless is useful for instance if the user is reading something on the screen, not touching it. At some point the screen might turn off and you will touch it or press some buttons to switch it on again. Therefore, the wireless shouldn't be interrupted here. So, instead of switching off the wireless at once when the screen turns off, Green Power will wait that this delay elapses before switching off the wireless.</p> <p>Wireless on delay This setting defines how long Green Power keeps the wireless on before turning it off again. This applies to the Wifi if the setting "Manage Wifi" is selected, and this applies to the Mobile Network if the setting "Manage Mobile Network" is selected.</p> <p>Wireless off delay This setting defines how long Green Power keeps the wireless off before turning it on again. This applies to the Wifi if the setting "Manage Wifi" is selected, and this applies to the Mobile Network if the setting "Manage Mobile Network" is selected.</p> <p>Screen on setting If this is selected, the wireless will be kept on when the screen is on. This applies to the Wifi if the setting "Manage Wifi" is selected, and this applies to the Mobile Network if the setting "Manage Mobile Network" is selected.</p> <p>If this is not selected, then Green Power will not make any difference whether the screen is on or off: It will regularly switch on and off wireless if needed even if the screen is on. This can be useful if you are using the phone for anything else than using wireless data (calling, playing local game, etc). In such a case you don't need the wireless to be always on.</p> <p>Power on setting If this is selected, the wireless will be kept on when the phone is connected to a power source. This</p>

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	<p>applies to the Wifi is the setting "Manage Wifi" is selected, and this applies to the Mobile Network if the setting "Manage Mobile Network" is selected.</p> <p>This overrides the "Screen on setting": If this is selected and the power is connected, then wireless will be kept on whatever the screen state is.</p> <p>If this is not selected, then Green Power will not make any difference whether the phone is connected to the power or not:: It will regularly switch on and off wireless if needed.</p> <p>Check Traffic If this is selected, then prior to turning off wireless, Green Power will check that there is no network traffic. If there is, it will wait a few seconds and checks again until there is no traffic anymore.")</p>
<p>[1e] associate each given one of the network service usage activities with a service usage control policy dynamically selected from the set of service usage control policies, based on the first classification of the given network service usage activity and at least one device state; and</p>	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g., the disclosures identified for claims [1b]-[1d].</i></p>
<p>[1f] manage network data access via the at least one wireless modem for each of the plurality of applications according to the dynamically selected service usage control policy for each given network</p>	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g., the disclosures identified for claims [1b]-[1d].</i></p>

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service activity of that application; and			
[1g] a memory coupled to the processor and configured to provide the processor with instructions.	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p>Android devices, such as the Nexus One, include memory to store instructions provided by mobile apps, such as JuiceDefender.</p> <p><i>See, e.g., SAMSUNG_PRIORART0000001 (Nexus) at 331:</i></p> <table border="1"> <tr> <td>Storage</td><td> Flash memory: 512MB RAM: 512MB microSD card: 4GB microSD card included (expandable to 32GB) </td></tr> </table>	Storage	Flash memory: 512MB RAM: 512MB microSD card: 4GB microSD card included (expandable to 32GB)
Storage	Flash memory: 512MB RAM: 512MB microSD card: 4GB microSD card included (expandable to 32GB)		
[2] The wireless end-user communications device of claim 1, wherein the dynamically selected service usage control policy for a given network service usage activity is further selected based on an application behavior for the application associated with that network service usage activity.	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g., the disclosures identified for claims [1 pre] – [1g].</i></p>		

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[3] The wireless end-user communications device of claim 1, wherein the dynamically selected service usage control policy for a given network service usage activity is further selected based on whether the application associated with that network service usage activity is currently in the foreground of user interaction.	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g.,</i> the disclosures identified for claims [1 pre] – [1g].</p>
[4] The wireless end-user communications device of claim 1, wherein the set of service usage control policies further comprises a third policy that blocks data communication associated with the given network service usage activity.	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g.,</i> the disclosures identified for claims [1 pre] – [1g].</p>
[5] The wireless end-user communications device of claim 1, wherein the dynamically selected service usage control policy for a given network service usage activity is further selected	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g.,</i> the disclosures identified for claims [1 pre] – [1g].</p>

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'224 Claims	Android Device with One or More Apps
based on a messaging layer behavior for the application associated with that network service usage activity.	
[6] The wireless end-user communications device of claim 1, wherein for the second policy that defers data communication associated with the given network service usage activity until the device state change occurs, the device state change comprises a change in device power state.	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g.,</i> the disclosures identified for claims [1 pre] – [1g].</p>
[7] The wireless end-user communications device of claim 1, wherein for the second policy that defers data communication associated with the given network service usage activity until the device state change occurs, the device state change comprises a change from a modem power save state that is not triggered by the given network service usage activity.	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g.,</i> the disclosures identified for claims [1 pre] – [1g].</p>

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'224 Claims	Android Device with One or More Apps
<p>[8] The wireless end-user communications device of claim 1, wherein for the second policy that defers data communication associated with the given network service usage activity until the device state change occurs, the device state change comprises a change to a network connection state that is not triggered by the given network service usage activity.</p>	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g.,</i> the disclosures identified for claims [1 pre] – [1g].</p>
<p>[9] The wireless end-user communications device of claim 1, wherein for the second policy that defers data communication associated with the given network service usage activity until the device state change occurs, the device state change comprises an aggregation of demand from multiple network service usage activity.</p>	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g.,</i> the disclosures identified for claims [1 pre] – [1g].</p>
<p>[10] The wireless end-user communications device of claim 1, wherein for the</p>	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p>

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'224 Claims	Android Device with One or More Apps
second policy that defers data communication associated with the given network service usage activity until the device state change occurs, the device state change comprises a change in user interaction with the wireless end-user communications device.	<i>See, e.g.</i> , the disclosures identified for claims [1 pre] – [1g].
[11] The wireless end-user communications device of claim 1, wherein the dynamic selection of the service usage control policy is further based on a user preference setting for a given one of the applications.	Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures: <i>See, e.g.</i> , the disclosures identified for claims [1 pre] – [1g].
[12] The wireless end-user communications device of claim 1, wherein the processor is further configured to monitor power consumption for each of the plurality of applications, and wherein the dynamic selection of the service usage control policy for a given network service usage activity is further based	Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures: <i>See, e.g.</i> , the disclosures identified for claims [1 pre] – [1g].

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'224 Claims	Android Device with One or More Apps
on the monitored power consumption for the application associated with the given network service usage activity.	
[13] The wireless end-user communications device of claim 1, wherein the processor is further configured to monitor network service usage behavior for each of the plurality of applications, and wherein the dynamic selection of the service usage control policy for a given network service usage activity is further based on a comparison of the monitored network service usage behavior for the application associated with the given network service usage activity to expected access limits for that application.	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g.,</i> the disclosures identified for claims [1 pre] – [1g].</p>
[14] The wireless end-user communication device of claim 13, wherein the dynamic selection of the service usage control policy restricts	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g.,</i> the disclosures identified for claims [1 pre] – [1g].</p>

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'224 Claims	Android Device with One or More Apps
network access due to the monitored network service usage behavior exceeding the expected access limits for the application associated with the given network service usage activity.	
[15] The wireless end-user communication device of claim 1, wherein the second policy limits an allowable duration of network access events for a given application.	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g.,</i> the disclosures identified for claims [1 pre] – [1g].</p>
[16] The wireless end-user communication device of claim 1, wherein the second policy time windows network access events for a given application.	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g.,</i> the disclosures identified for claims [1 pre] – [1g].</p>
[17] The wireless end-user communication device of claim 1, wherein the at least one wireless modem comprises first and second modems, and wherein the service usage control policy dynamically selected for at	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g.,</i> the disclosures identified for claims [1 pre] – [1g].</p>

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'224 Claims	Android Device with One or More Apps
least one given one of the network service usage activities is further selected in dependence upon which of the first and second modems will supply network connectivity for that network service usage activity.	

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U.S. Patent No. 9,143,976

Exhibit F-10

Based on Headwater's apparent positions as to the scope of the patent's claims, as best they can be deciphered, the reference(s) charted below anticipate(s) or at least render(s) obvious the identified claims. The portions of the prior art reference cited below are not exhaustive but are exemplary in nature.

This disclosure is not an admission that Samsung concedes any claim construction implied or suggested by Headwater's apparent positions as to the scope of the patent's claims, nor is it an admission by Samsung that any of its products are covered by or infringe the patent's claims, particularly when they are properly construed and applied. Samsung is not taking any claim construction positions through this disclosure, including whether the preamble is a limitation.

Samsung reserves the right to rely on additional citations or sources of evidence that also may be applicable, or that may become applicable in light of claim construction, changes in Headwater's infringement contentions, and/or information obtained during discovery as the case progresses. Samsung further reserves the right to amend or supplement this claim chart at a later date as more fully set forth in the Invalidity Contentions. For example, Defendants are currently in the process of taking discovery from non-parties including Nokia, HMD, Citrix, Google, Apple, and Microsoft. Accordingly, Defendants reserve the right to modify, amend, and/or supplement these contentions as information becomes available from non-parties.

Android is mobile device operating system that was initially released in September 2008. Applications (or "apps") can be installed on mobile devices that run Android. Any mobile device that predates the '976 patent, running an Android version with one or more apps that also predate the '976 patent, qualifies as prior art under at least pre-AIA 35 U.S.C. §§ 102(a)/(b). Such a device was known, used, offered for sale, and/or sold in the United States before the '976 patent.

Exemplary mobile devices that predate the '976 patent include:

- HTC Dream/T-Mobile G1 (released September 2008)
- Nexus One (released January 2010)

Exemplary Android versions that predate the '976 patent include:¹

- Android 1.0 (released September 2008)

¹ See, e.g., SAMSUNG_PRIORART0003998; SAMSUNG_PRIORART0004085; SAMSUNG_PRIORART0004081; SAMSUNG_PRIORART0004086; SAMSUNG_PRIORART0004083; SAMSUNG_PRIORART0004084.

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- Android 1.1 (released February 2009)
- Android Cupcake (1.5) (released April 2009)
- Android Donut (1.6) (released September 2009)
- Android Eclair (2.0, 2.0.1, 2.1) (released October 2009 - January 2010)
- Android Froyo (2.2) (released May 20, 2010)

Exemplary apps that predate the '976 patent include:²

- JuiceDefender (released January 2010) and its associated add-on application, UltimateJuice (collectively "JuiceDefender App")
- GreenPower (released March 2010)

As a specific example, a Nexus One mobile device running Android Froyo 2.2 with the JuiceDefender application installed qualifies as prior art under at least pre-AIA 35 U.S.C. §§ 102(a)/(b). This device was known, used, offered for sale, and/or sold in the United States on or before May 20, 2010. At least the various documents cited in this claim chart describe the functionality of this device.

To the extent it is argued that Android Device with One or More Apps does not disclose or include each and every asserted claim limitation, either expressly or inherently, it would have been obvious to a POSITA to incorporate any of the teachings from the references identified in Exhibits F-01 through F-11, and F-F (whose exemplary citations for each limitation are incorporated herein) into Android Device with One or More Apps. Indeed, it would have been obvious to make such combinations and a POSITA would have had reason and motivation to make such combinations at least for reasons described herein and in the cover pleading.

'976 Claims	Android Device with One or More Apps
[1 pre] A wireless end-user device, comprising:	To the extent the preamble is a limitation, Android Device with One or More Apps discloses and/or renders obvious this element. For example, see the following passages and/or figures, as well as related disclosures:

² See, e.g., SAMSUNG_PRIORART0000335-SAMSUNG_PRIORART0000383; POUZERATE0000001-POUZERATE0000261.

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'976 Claims	Android Device with One or More Apps
	<p><u>Nexus One</u> The Nexus One is an example of an Android smartphone.</p> <p><i>See, e.g., SAMSUNG_PRIORART0000001 (Nexus) at 17:</i></p> <div> <p style="text-align: center;">Getting to know your phone</p> </div> <p><u>JuiceDefender App</u></p> <p>JuiceDefender is a mobile application (or “app”) intended to run on a mobile device, such as an Android smartphone. The Nexus One is an example of an Android smartphone capable of running JuiceDefender.</p> <p>SAMSUNG_PRIORART0000379 (Latedroid) (“JuiceDefender saves battery power (lots of it!) by controlling the device data connection and/or WiFi ... You can schedule regular APN/WiFi activation to let background data sync occur and have APN/WiFi</p>

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'976 Claims	Android Device with One or More Apps
	<p>enabled while the screen is on. It also helps in minimizing distractions.”)</p> <p>SAMSUNG_PRIORART0000361 (Purdy) (“Android: Most phones don't make it easy to switch cellular data connection on and off, even if doing so really helps save your battery. JuiceDefender toggles wireless data and Wi-Fi on and off every so often to preserve power.”)</p> <p><u>GreenPower App</u></p> <p>GreenPower is a mobile application (or “app”) intended to run on a mobile device, such as an Android smartphone. The Nexus One is an example of an Android smartphone capable of running GreenPower.</p> <p><i>See, e.g.,</i> POUZERATE0000015 (GDG Oslo) at 5:</p>

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'976 Claims	Android Device with One or More Apps
	<div><h2>Background</h2><ul style="list-style-type: none">History of GreenPower app<ul style="list-style-type: none">2010: My first HTC heroMarch 2010: First Free version publishedOctober 2010: First Paid version publishedJan 2013:<ul style="list-style-type: none">1.3M downloads Free (>2500/day)200.000 active users<div><p>23.01.2013 - GDG Oslo - 5/35</p></div><p><i>See, e.g.,</i> POUZERATE0000002 (App Circus) at 9:</p></div>

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'976 Claims	Android Device with One or More Apps
	<p>Be mainstream</p> <ul style="list-style-type: none"> ▶ Cross Android versions <ul style="list-style-type: none"> ◦ Froyo ◦ Gingerbread ◦ Honeycomb ◦ Ice cream sandwich (as soon as someone offers me a Galaxy Nexus) ▶ Cross technologies <ul style="list-style-type: none"> ◦ GSM ◦ CDMA ◦ 2G, 3G, LTE ▶ 18 languages (not everybody speaks English, I know, I'm French) 
<p>[1a] a wireless wide area network (WWAN) modem to communicate data for Internet service activities between the device and at least one WWAN, when configured for and connected to the WWAN;</p>	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><u>Nexus One</u></p> <p><i>See, e.g., SAMSUNG_PRIORART0000001 (Nexus) at 332:</i></p>

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'976 Claims	Android Device with One or More Apps		
	<table border="1"> <tr> <td>Cellular & wireless</td><td> <p>Nexus One GSM phones compatible with 3G mobile networks from AT&T (U.S.) and Rogers Wireless (Canada): 3G UMTS bands I/II/V: 2100, 1900, 850 MHz</p> <p>Nexus One GSM phones compatible with 3G mobile networks from T-Mobile (U.S.): 3G UMTS bands I/IV/VIII: 2100, 1700(AWS), 900 MHz</p> <p>All Nexus One GSM phones: HSDPA 7.2Mbps HSUPA 2Mbps GSM/EDGE 850, 900, 1800, 1900 MHz Wi-Fi 802.11b/g Bluetooth 2.1 + EDR A2DP stereo Bluetooth</p> </td></tr> </table> <p><u>JuiceDefender App</u></p> <p>SAMSUNG_PRIORART0000379 (Latedroid) (“JuiceDefender saves battery power (lots of it!) by controlling the device data connection and/or WiFi ... You can schedule regular APN/WiFi activation to let background data sync occur and have APN/WiFi enabled while the screen is on. It also helps in minimizing distractions.”).</p> <p>SAMSUNG_PRIORART0000351 (Configuration-Translated) (“APN: activates / deactivates the APN connection, in its submenu we find the MMS button that activated configures the reception of MMS in the same way that we have the APN and Prefer Wifi that activated will try to connect first to this and if to five seconds does not find an available network will activate the APN. WIFI: activates / deactivates the WIFI connection, in its submenu we find the following buttons, Auto Disable turns off the wifi in the case of not finding a network available to save battery, in case it is deactivated we will have to activate it manually; Enable on Schedule / Peak / Screen will activate the wifi as we have configured those buttons that we will see below.”)</p>	Cellular & wireless	<p>Nexus One GSM phones compatible with 3G mobile networks from AT&T (U.S.) and Rogers Wireless (Canada): 3G UMTS bands I/II/V: 2100, 1900, 850 MHz</p> <p>Nexus One GSM phones compatible with 3G mobile networks from T-Mobile (U.S.): 3G UMTS bands I/IV/VIII: 2100, 1700(AWS), 900 MHz</p> <p>All Nexus One GSM phones: HSDPA 7.2Mbps HSUPA 2Mbps GSM/EDGE 850, 900, 1800, 1900 MHz Wi-Fi 802.11b/g Bluetooth 2.1 + EDR A2DP stereo Bluetooth</p>
Cellular & wireless	<p>Nexus One GSM phones compatible with 3G mobile networks from AT&T (U.S.) and Rogers Wireless (Canada): 3G UMTS bands I/II/V: 2100, 1900, 850 MHz</p> <p>Nexus One GSM phones compatible with 3G mobile networks from T-Mobile (U.S.): 3G UMTS bands I/IV/VIII: 2100, 1700(AWS), 900 MHz</p> <p>All Nexus One GSM phones: HSDPA 7.2Mbps HSUPA 2Mbps GSM/EDGE 850, 900, 1800, 1900 MHz Wi-Fi 802.11b/g Bluetooth 2.1 + EDR A2DP stereo Bluetooth</p>		

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'976 Claims	Android Device with One or More Apps
	<p>SAMSUNG_PRIORART0000361 (Purdy) (“Android: Most phones don't make it easy to switch cellular data connection on and off, even if doing so really helps save your battery. JuiceDefender toggles wireless data and Wi-Fi on and off every so often to preserve power.”).</p> <p>SAMSUNG_PRIORART0000335 (Ruddock) (“Juice Defender is a battery conservation app. It uses various triggers, rules, and timers to control how often your device utilizes 3G/EDGE APN's (data connections) as well as WiFi. These data connections are the number one drainers of battery life when your phone is idle, so Juice Defender allows you to decide when, where, and how often you want them to be active.”).</p>
<p>[1b] a wireless local area network (WLAN) modem to communicate data for Internet service activities between the device and at least one WLAN, when configured for and connected to the WLAN;</p>	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g.,</i> the disclosures identified for claims [1 pre] – [1a].</p> <p><u>GreenPower App</u></p> <p>POUZERATE0000196 (GreenPower User Guide) (“Manage Wifi If this setting is selected, then Green Power will regularly turn on and off the Wifi connection, based on the durations specified in the settings below.</p> <p>If this setting is not selected, then Green Power will leave the Wifi as it is, never turning it on or off.</p> <p>Please note that if you manually switches off the Wifi, then Green Power will unselect the “Manage Wifi” setting in order not to automatically switch on the Wifi again despite your manual action. Then, if you switch back on the Wifi or reselect “Manage Wifi” setting, Green Power will resume managing Wifi connection.”).</p>

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'976 Claims	Android Device with One or More Apps
<p>[1c] a device display;</p>	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><u>Nexus One</u></p> <p><i>See, e.g., SAMSUNG_PRIORART0000001 (Nexus) at 17:</i></p> <div> <p>Getting to know your phone</p> </div> <p><u>JuiceDefender</u></p> <p>SAMSUNG_PRIORART0000379 (Latedroid):</p>

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'976 Claims	Android Device with One or More Apps
	<div> <h2>JuiceDefender</h2> </div> <div> </div> <div> <p>JuiceDefender features to your liking.</p> </div> <div> <p>JuiceDefender saves battery power (<i>lots of it!</i>) by controlling the device data connection and/or WiFi.</p> </div> <div> <p>You can schedule regular APN/WiFi activation to let background data sync occur and have APN/WiFi enabled while the screen is on. It also helps in minimizing distractions ;)</p> </div> <div> </div> <div> <p>The <i>Easy Mode</i> is a no-fuss one-click way to let your battery last longer - much longer. Just enable JuiceDefender by clicking on the big button and you're ready to go!</p> </div> <div> <p>If you want more fine-grained control, try <i>Advanced Mode</i>, where you can configure all</p> </div>
<p>[1d] one or more processors configured to classify, for a first end-user application capable of interacting in the device display foreground with a user and capable of at least some Internet service activity when not interacting in the device display foreground with the user, whether or not the first end-user application,</p>	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g., SAMSUNG_PRIORART0000001 (Nexus) at 115-117:</i></p>

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'976 Claims	Android Device with One or More Apps
when running, is interacting in the device display foreground with the user,	<h3>Configuring account sync and display options</h3> <p>You can configure background data use and synchronization options for all of the applications on your phone. You can also configure what kinds of data you synchronize for each account. Some applications, such as Gmail and Calendar, have their own synchronization settings.</p> <p>Some applications, such as Contacts and Gmail, can sync data from multiple applications. Others, such as Calendar, sync data only from the first Google Account you sign into on your phone, or from an account associated specifically with that application.</p> <p>For some accounts, syncing is two-directional; changes that you make to the information on your phone are made to the copy of that information on the web. Your Google Account works this way. Other accounts support only one-way sync; the information on your phone is read-only.</p> <p>You can use the Contacts display options to configure the kinds of contacts that are displayed, as described in "Changing which contacts are displayed" on page 106.</p> <h4>To configure general sync settings</h4> <ol style="list-style-type: none"><li>1 Open the Accounts & Sync Settings screen. <p>You can do this in Contacts by pressing Menu  and touching Accounts, or directly in the Settings application (press Home , press Menu , and touch Settings).</p>

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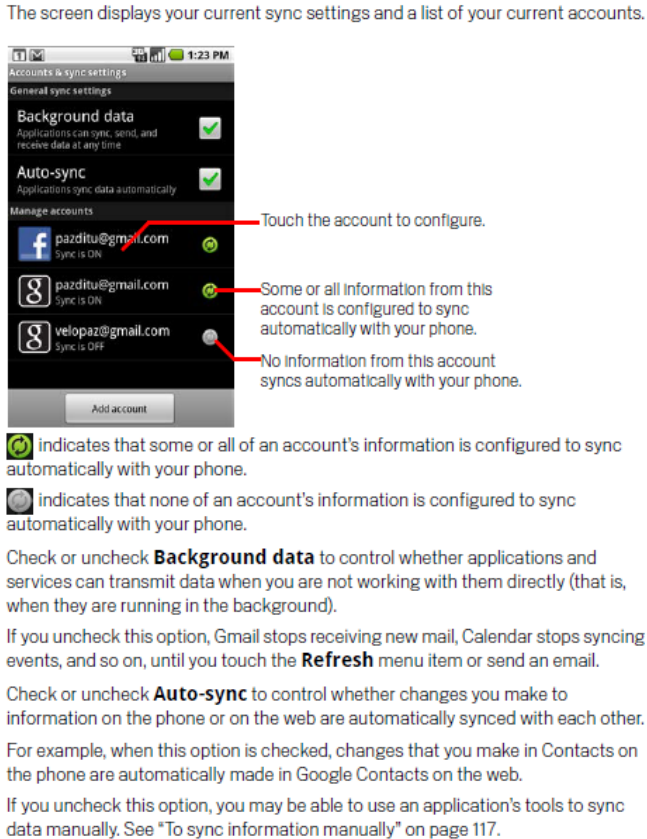
'976 Claims	Android Device with One or More Apps
	<p>The screen displays your current sync settings and a list of your current accounts.</p>  <p>2 Check or uncheck Background data to control whether applications and services can transmit data when you are not working with them directly (that is, when they are running in the background).</p> <p>If you uncheck this option, Gmail stops receiving new mail, Calendar stops syncing events, and so on, until you touch the Refresh menu item or send an email.</p> <p>3 Check or uncheck Auto-sync to control whether changes you make to information on the phone or on the web are automatically synced with each other.</p> <p>For example, when this option is checked, changes that you make in Contacts on the phone are automatically made in Google Contacts on the web.</p> <p>If you uncheck this option, you may be able to use an application's tools to sync data manually. See "To sync information manually" on page 117.</p>

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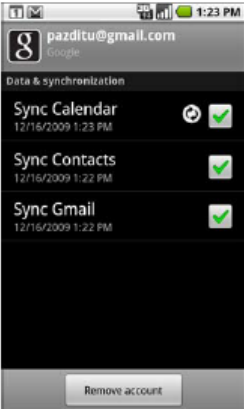
'976 Claims	Android Device with One or More Apps
	<p>To sync information manually</p> <ol style="list-style-type: none">1 Open the Accounts & Sync Settings screen.2 Touch the account whose data you want to sync.3 Press Menu  and touch Sync now. <p>To change an account's sync settings</p> <ol style="list-style-type: none">1 Open the Accounts & Sync Settings screen.2 Touch the account whose sync settings you want to change. <p>The Data and Synchronization screen opens, displaying a list of the kinds of information the account can sync.</p> <p>Checked items are configured to sync to your phone.</p>  <ol style="list-style-type: none">3 Check or uncheck the kinds of information you want to sync to the phone. <p>Unchecking an option does not remove the information from your phone; it simply stops it from syncing automatically. To remove the information previously synced for the account, you must remove the account.</p> <p><i>See, e.g., SAMSUNG_PRIORART0000001 (Nexus) at 218:</i></p>

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'976 Claims	Android Device with One or More Apps
	<p>Open in background Check to open new windows in the background when you touch & hold a link and touch Open in new window. This is useful when you are working with windows that take a long time to download and display. Press Menu ☰, touch Windows, and then touch the new window to view it. Uncheck if you prefer new windows that you open in this way to open in place of the current window. See "To switch Browser windows" on page 213.</p> <p>Set home page Opens a dialog where you can enter the URL of a page that you want to open whenever you open a new Browser window. If you prefer to open new Browser windows more quickly, by not opening any page by default, leave the dialog blank.</p> <p><i>See, e.g., SAMSUNG_PRIORART0000001 (Nexus) at 286:</i></p> <p>Refresh settings</p> <p>These settings control how frequently the information on the News & Weather widget is updated. In addition to using these settings, adding or removing the News & Weather widget from the Home screen also turns Auto-refresh on or off. For more about working with widgets, see "Customizing the Home screen" on page 58.</p> <p>Auto-refresh Check to have News & Weather update information automatically, at the frequency you set with Refresh interval. Uncheck to update the news and weather only when you press Menu ☰ and touch Refresh. For automatic refresh to work, you must also have Background Data turned on in the Settings application. See "Accounts & sync settings" on page 320.</p> <p><i>See, e.g., SAMSUNG_PRIORART0000001 (Nexus) at 320:</i></p>

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'976 Claims	Android Device with One or More Apps
	<p>Accounts & sync settings</p> <p>Use the Accounts & Sync settings to add, remove, and manage your Google and other supported accounts. You also use these settings to control how and whether all applications send, receive, and sync data on their own schedules, and whether all applications can synchronize user data automatically.</p> <p>Gmail, Calendar, and other applications may also have their own settings to control how they synchronize data; see the sections on those applications for details.</p> <p>Accounts & sync settings screen</p> <p>Background data Check to permit applications to synchronize data in the background, whether or not you are actively working in them. Unchecking this setting can save battery power and lowers (but does not eliminate) data use.</p> <p>Auto-sync Check to permit applications to synchronize data on their own schedule. If you uncheck this setting, you must touch an account in the list on this screen, press Menu , and touch Sync now to synchronize data for that account. Synchronizing data automatically is disabled if Background data is unchecked. In that case, the Auto-sync checkbox is dimmed.</p> <p>Manage accounts The rest of this screen lists the Google Accounts and other accounts you've added to the phone. Adding accounts is described in "Accounts" on page 111.</p> <p>If you touch an account in this screen, its account screen opens.</p>
<p>[1e] for a time period when data for Internet service activities is communicated through a WWAN modem connection to the at least one WWAN, apply a first differential traffic control policy to Internet</p>	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g., the disclosures identified for claims [1d].</i></p> <p><u>JuiceDefender App</u></p>

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'976 Claims	Android Device with One or More Apps
<p>service activity on behalf of the first end-user application, such that Internet service activity on behalf of the first end-user application is disallowed when the one or more processors classify the first end-user application as not interacting in the device display foreground with the user, and</p>	<p>SAMSUNG_PRIORART0000379 (Latedroid):</p> <div> <h2>JuiceDefender</h2> </div> <div> </div> <div> <p>JuiceDefender features to your liking.</p> </div> <div> <p>JuiceDefender saves battery power (<i>lots of it!</i>) by controlling the device data connection and/or WiFi.</p> </div> <div> <p>You can schedule regular APN/WiFi activation to let background data sync occur and have APN/WiFi enabled while the screen is on. It also helps in minimizing distractions ;)</p> </div> <div> </div> <div> <p>The <i>Easy Mode</i> is a no-fuss one-click way to let your battery last longer - much longer. Just enable JuiceDefender by clicking on the big button and you're ready to go!</p> </div> <div> <p>If you want more fine-grained control, try <i>Advanced Mode</i>, where you can configure all</p> </div>

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'976 Claims	Android Device with One or More Apps
	<p>There are 5 <i>triggers</i> for the enable/disable behaviour:</p> <p>Battery - when battery level gets low (less than 15%), disable APN/WiFi, and re-enable them when battery level is restored. APN/WiFi will also be enabled while the device is being recharged.</p> <p>Schedule - regularly enable APN/WiFi for a short period of time, to <i>let background data sync</i> occur (email, Twitter, Facebook, stock quotes...). If <i>Quick</i> is disabled APN/WiFi stays enabled for a longer period, useful if your data connection is very slow or you need to sync lots of data.</p> <p>Night schedule (requires <i>UltimateJuice</i>) - disable APN/WiFi during night time; you can also optionally put the phone in Silent Mode.</p> <p>Screen - enable APN/WiFi <i>while the screen is on</i> to allow browsing, tweeting, procrastination and general internet-powered enjoyment, regardless of scheduled events and battery level.</p> <p>Location (requires <i>UltimateJuice</i>) - this trigger controlled by the 'AutoWiFi' button. It disables WiFi when the device is not in range of any known WiFi network. The location is determined via the cellular network, so it's usually quite coarse. It's a fully automatic set-it-and-forget-it WiFi manager!</p> <p>The <i>priority order</i> of the triggers is 1) location (WiFi only), 2) screen, 3) battery, 4) night schedule, 5) schedule - this means, for example, that when the screen is on APN/WiFi will be enabled even when the battery is low, or that the regular schedule won't occur during the night period.</p> <p>SAMSUNG_PRIORART0000361 (Purdy):</p>

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'976 Claims	Android Device with One or More Apps
	<div> </div> <p>Android: Most phones don't make it easy to switch cellular data connection on and off, even if doing so really helps save your battery. JuiceDefender toggles wireless data and Wi-Fi on and off every so often to preserve power.</p> <p>The whole point of a smartphone with Google apps baked in is constant connectivity, of course, and you don't want to shut off access to your email, Google Voice messages, and other online services. But when you're walking around, at your office desk, and generally not actively using your phone, you probably don't need your phone to check in every minute with the mothership. JuiceDefender lets you set a time interval—5 minutes, 15, 30, an hour, two hours—at which its background process will re-enable your carrier APN, see if there are new messages or data coming in, and then shut off again. You can also set similar Wi-Fi connectivity rules, or only have web data enabled when you've got your screen on. Besides the battery savings,</p> <p>those who like to parse out their email checks and avoid minute-by-minute distractions see some benefit here, too.</p> <p><i>See, e.g.,</i> SAMSUNG_PRIORART0000351 (Configuration-Translated):</p> <div> <p>Schedule Enable APN for 5m every 30m</p> </div> <p>“• Schedule: used to configure how often Juice Defender will activate the APN / WIFI to synchronize emails, social networks, etc .., we select the interval in the bar of your submenu for example 5 minutes every half hour also has the Quick button to minimize the connection time for the previous example would be 2 minutes every half hour, I recommend not using this option if the selected time period is too short, it may not give you time to connect.”</p>

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'976 Claims	Android Device with One or More Apps
	<p><i>See, e.g.</i>, SAMSUNG_PRIORART0000361 (Purdy):</p> <p>Schedule Enable APN+MMS 2m every 15m</p> <p>“JuiceDefender lets you set a time interval—5 minutes, 15, 30, an hour, two hours— at which its background process will re-enable your carrier APN, see if there are new messages or data coming in, and then shut off again.”</p> <p><i>See, e.g.</i>, SAMSUNG_PRIORART0000335 (Ruddock):</p> <p>Schedule Enable Data/WiFi for 1m every 15m</p> <p><u>GreenPower App</u></p> <p>POUZERATE0000196 (GreenPower User Guide) (“Manage Wifi If this setting is selected, then Green Power will regularly turn on and off the Wifi connection, based on the durations specified in the settings below.</p> <p>If this setting is not selected, then Green Power will leave the Wifi as it is, never turning it on or off.</p> <p>Please note that if you manually switches off the Wifi, then Green Power will unselect the “Manage Wifi” setting in order not to automatically switch on the Wifi again despite your manual action. Then, if you switch back on the Wifi or reselect “Manage Wifi” setting, Green Power will resume managing Wifi connection.</p> <p>Manage Mobile Network If this setting is selected, then Green Power will regularly turn on and off the Mobile Network connection, based on the durations specified in the settings below.</p>

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'976 Claims	Android Device with One or More Apps
	<p>If this setting is not selected, then Green Power will leave the Mobile Network as it is, never turning it on or off.</p> <p>Please note that in order for Green Power to turn on / off Mobile Network, this one has to be manually enabled by the user first in the phone settings (Wireless & networks → Mobile Network) or in Green Power settings (Global wireless settings → Mobile Network) . Green Power can't itself turn on Mobile Network as this is a limitation of the Android system for security and cost reasons.”).</p>
[1f] indicate to the first end-user application, via an application program interface (API), one or more network access conditions based on the applied first differential traffic control policy, including	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g.,</i> the disclosures identified for claims [1d].</p>
[1g] a first network access condition that indicates the unavailability to the first end-user application, when the first end-user application is classified as not interacting in the device display foreground with the user, of Internet data service that is available via the WWAN modem, and	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g.,</i> the disclosures identified for claims [1c]-[1e].</p>
[1h] a second network access condition that indicates the availability to the first end-user application, when the first end-user application is classified as interacting in the device display foreground with the user, of	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g.,</i> the disclosures identified for claims [1c]-[1e].</p>

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'976 Claims	Android Device with One or More Apps
Internet data service that is available via the WWAN modem.	
[2] The wireless end-user device of claim 1, wherein the one or more processors are configured to classify that the first end-user application is not interacting in the device display foreground with the user when the user of the device is not directly interacting with that application or perceiving any benefit from that application.	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g.,</i> the disclosures identified for claims [1 pre]-[1h].</p>
[3] The wireless end-user device of claim 1, further comprising a user interface to provide the user of the device with information regarding why the first differential traffic control policy is applied to the first end-user application.	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g.,</i> the disclosures identified for claims [1 pre]-[1h].</p>
[4] The wireless end-user device of claim 1, further comprising a user interface to inform the user of the device when there are options to set, control, override, or modify service usage controls that affect the first differential traffic control policy.	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g.,</i> the disclosures identified for claims [1 pre]-[1h].</p>

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'976 Claims	Android Device with One or More Apps
[5] The wireless end-user device of claim 1, wherein the first differential traffic control policy is part of a multimode profile having different policies for different networks.	Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures: <i>See, e.g.,</i> the disclosures identified for claims [1 pre]-[1h].
[6] The wireless end-user device of claim 5, wherein the one or more processors are further configured to select a traffic control policy from the multimode profile based at least in part on the type of network connection currently in use by the device.	Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures: <i>See, e.g.,</i> the disclosures identified for claims [1 pre]-[1h].
[7] The wireless end-user device of claim 6, wherein the one or more processors are further configured to, when the type of network connection is at least one type of WLAN connection, select a traffic control policy from the multimode profile based at least in part on a type of network connection from the WLAN to the Internet.	Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures: <i>See, e.g.,</i> the disclosures identified for claims [1 pre]-[1h].
[8] The wireless end-user device of claim 1, wherein the one or more processors are further configured to classify whether a second end-user application is interacting in the device display foreground with the user,	Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures: <i>See, e.g.,</i> the disclosures identified for claims [1 pre]-[1h].

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'976 Claims	Android Device with One or More Apps
<p>apply a second differential traffic control policy to Internet service activity on behalf of the second end-user application, and indicate to the second end-user application, via the API, one or more network access conditions based on the applied second differential traffic control policy.</p>	
<p>[9] The wireless end-user device of claim 1, further comprising a network stack interface integrated with the API.</p>	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g., the disclosures identified for claims [1 pre]-[1h].</i></p>
<p>[10] The wireless end-user device of claim 1, further comprising a networking stack, wherein the one or more processors are further configured to, at an application service interface layer, identify application traffic flows prior to the flows entering the networking stack.</p>	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g., the disclosures identified for claims [1 pre]-[1h].</i></p>
<p>[11] The wireless end-user device of claim 1, wherein the one or more processors apply the first differential traffic control policy to one of but not both of a connection to a roaming</p>	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g., the disclosures identified for claims [1 pre]-[1h].</i></p>

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'976 Claims	Android Device with One or More Apps
WWAN network and a connection to a home WWAN network.	
[12] The wireless end-user device of claim 1, wherein the one or more processors are further configured to dynamically change the application of the first differential traffic control policy based on a power state of the device.	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g.,</i> the disclosures identified for claims [1 pre]-[1h].</p>
[13] The wireless end-user device of claim 1, wherein the one or more processors are further configured to dynamically change the application of the first differential traffic control policy based on a device usage state.	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g.,</i> the disclosures identified for claims [1 pre]-[1h].</p>
[14] The wireless end-user device of claim 1, wherein the one or more processors configured to classify whether or not the first end-user application, when running, in interacting in the device display foreground with a user perform the classification based at least in part on a state of user interface priority for the application.	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g.,</i> the disclosures identified for claims [1 pre]-[1h].</p>
[15]The wireless end-user device of claim 1, wherein the one or more	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p>

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'976 Claims	Android Device with One or More Apps
processors are further configured to dynamically change the application of the first differential traffic control policy based on power control state changes for one or more of the modems.	<i>See, e.g.</i> , the disclosures identified for claims [1 pre]-[1h].
[16] The wireless end-user device of claim 1, wherein the one or more processors are configured to associate the first end-user application with the first differential traffic control policy based on an application behavior.	Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures: <i>See, e.g.</i> , the disclosures identified for claims [1 pre]-[1h].
[17] The wireless end-user device of claim 1, wherein the differential traffic control policy defines that applications to which the policy applies can only have WWAN network access events during particular time windows.	Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures: <i>See, e.g.</i> , the disclosures identified for claims [1 pre]-[1h].
[18] The wireless end-user device of claim 1, wherein the one or more processors are further configured to update the first differential traffic control policy based on information received from a network element.	Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures: <i>See, e.g.</i> , the disclosures identified for claims [1 pre]-[1h].
[19] The wireless end-user device of claim 1, further comprising an agent to block, modify, remove, or replace,	Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:

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'976 Claims	Android Device with One or More Apps
based on the applied differential traffic control policy, user interface messages generated by the first end-user application.	<i>See, e.g.</i> , the disclosures identified for claims [1 pre]-[1h].
[20] The wireless end-user device of claim 1, wherein the one or more processors configured to apply the first differential traffic control policy to disallow Internet service activity on behalf of the first end-user application perform a disallowance of Internet service activity by intercepting open, connect, and/or write requests by the first end-user application to a network stack.	Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures: <i>See, e.g.</i> , the disclosures identified for claims [1 pre]-[1h].
[21] The wireless end-user device of claim 20, wherein the API responds to an intercepted request by the first end-user application by emulating network messaging.	Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures: <i>See, e.g.</i> , the disclosures identified for claims [1 pre]-[1h].
[22] The wireless end-user device of claim 21, wherein emulating network messaging comprises responding to a network request from the first end-user application by blocking the request from passing to a network stack and returning to the first end-user application a message indicating	Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures: <i>See, e.g.</i> , the disclosures identified for claims [1 pre]-[1h].

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'976 Claims	Android Device with One or More Apps
the network request was not successful.	
[23] The wireless end-user device of claim 1, the first differential traffic control policy comprising first and second sub-policies applicable respectively to Internet data service provided using the WWAN modem to connect to a home WWAN and a roaming WWAN, wherein the one or more processors are further configured to apply the first sub-policy when Internet data service is provided through a home WWAN and to apply the second sub-policy when Internet data service is provided through a roaming WWAN.	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g.,</i> the disclosures identified for claims [1 pre]-[1h].</p>
[24] The wireless end-user device of claim 1, the first differential traffic control policy comprising first, second, and third sub-policies applicable respectively to Internet data service provided using the WWAN modem and three different network types from the network types consisting of 2G, 3G, 4G, home, and roaming.	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g.,</i> the disclosures identified for claims [1 pre]-[1h].</p>

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'976 Claims	Android Device with One or More Apps
[25] The wireless end-user device of claim 1, wherein the API comprises a network access API.	Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures: <i>See, e.g.,</i> the disclosures identified for claims [1 pre]-[1h].
[26] The wireless end-user device of claim 1, wherein the one or more network access conditions indicated via the API to the first end-user application comprises information on whether a current connected WWAN is a roaming network or a non-roaming network.	Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures: <i>See, e.g.,</i> the disclosures identified for claims [1 pre]-[1h].
[27] The wireless end-user device of claim 1, wherein the API informs the first end-user application when it is allowed to access Internet data service that is available via the WWAN modem.	Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures: <i>See, e.g.,</i> the disclosures identified for claims [1 pre]-[1h].
[28] The wireless end-user device of claim 1, wherein the API informs the first end-user application of one or more network traffic controls that the first end-user application is expected to implement.	Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures: <i>See, e.g.,</i> the disclosures identified for claims [1 pre]-[1h].
[29] The wireless end-user device of claim 1, wherein the API instructs the	Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:

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'976 Claims	Android Device with One or More Apps
first end-user particular application to transition to a different state.	<i>See, e.g.</i> , the disclosures identified for claims [1 pre]-[1h].

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U.S. Patent No. 9,277,433

Exhibit G-10

Based on Headwater's apparent positions as to the scope of the patent's claims, as best they can be deciphered, the reference(s) charted below anticipate(s) or at least render(s) obvious the identified claims. The portions of the prior art reference cited below are not exhaustive but are exemplary in nature.

This disclosure is not an admission that Samsung concedes any claim construction implied or suggested by Headwater's apparent positions as to the scope of the patent's claims, nor is it an admission by Samsung that any of its products are covered by or infringe the patent's claims, particularly when they are properly construed and applied. Samsung is not taking any claim construction positions through this disclosure, including whether the preamble is a limitation.

Samsung reserves the right to rely on additional citations or sources of evidence that also may be applicable, or that may become applicable in light of claim construction, changes in Headwater's infringement contentions, and/or information obtained during discovery as the case progresses. Samsung further reserves the right to amend or supplement this claim chart at a later date as more fully set forth in the Invalidity Contentions. For example, Defendants are currently in the process of taking discovery from non-parties including Nokia, HMD, Citrix, Google, Apple, and Microsoft. Accordingly, Defendants reserve the right to modify, amend, and/or supplement these contentions as information becomes available from non-parties.

Android is mobile device operating system that was initially released in September 2008. Applications (or "apps") can be installed on mobile devices that run Android. Any mobile device that predates the '433 patent, running an Android version with one or more apps that also predate the '433 patent, qualifies as prior art under at least pre-AIA 35 U.S.C. §§ 102(a)/(b). Such a device was known, used, offered for sale, and/or sold in the United States before the '433 patent.

Exemplary mobile devices that predate the '433 patent include:

- HTC Dream/T-Mobile G1 (released September 2008)
- Nexus One (released January 2010)

Exemplary Android versions that predate the '433 patent include: ¹

¹ See, e.g., SAMSUNG_PRIORART0003998; SAMSUNG_PRIORART0004085; SAMSUNG_PRIORART0004081; SAMSUNG_PRIORART0004086; SAMSUNG_PRIORART0004083; SAMSUNG_PRIORART0004084.

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- Android 1.0 (released September 2008)
- Android 1.1 (released February 2009)
- Android Cupcake (1.5) (released April 2009)
- Android Donut (1.6) (released September 2009)
- Android Eclair (2.0, 2.0.1, 2.1) (released October 2009 - January 2010)
- Android Froyo (2.2) (released May 20, 2010)

Exemplary apps that predate the '433 patent include:²

- JuiceDefender (released January 2010) and its associated add-on application, UltimateJuice (collectively "JuiceDefender App")
- GreenPower (released March 2010)

As a specific example, a Nexus One mobile device running Android Froyo 2.2 with the JuiceDefender application installed qualifies as prior art under at least pre-AIA 35 U.S.C. §§ 102(a)/(b). This device was known, used, offered for sale, and/or sold in the United States on or before May 20, 2010. At least the various documents cited in this claim chart describe the functionality of this device.

To the extent it is argued that Android Device with One or More Apps does not disclose or include each and every asserted claim limitation, either expressly or inherently, it would have been obvious to a POSITA to incorporate any of the teachings from the references identified in Exhibits G-01 through G-11, and G-G (whose exemplary citations for each limitation are incorporated herein) into Android Device with One or More Apps. Indeed, it would have been obvious to make such combinations and a POSITA would have had reason and motivation to make such combinations at least for reasons described herein and in the cover pleading.

² See, e.g., SAMSUNG_PRIORART0000335-SAMSUNG_PRIORART0000383; POUZERATE0000001-POUZERATE0000261.

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'433 Claims	Android Device with One or More Apps
<p>[1 pre] A wireless end-user device, comprising:</p>	<p>To the extent the preamble is a limitation, Android Device with One or More Apps discloses and/or renders obvious this element. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><u>Nexus One</u> The Nexus One is an example of an Android smartphone.</p> <p><i>See, e.g., SAMSUNG_PRIORART0000001 (Nexus) at 17:</i></p> <div> <p>Getting to know your phone</p> </div> <p><u>JuiceDefender App</u></p>

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'433 Claims	Android Device with One or More Apps
	<p>JuiceDefender is a mobile application (or “app”) intended to run on a mobile device, such an Android smartphone. The Nexus One is an example of an Android smartphone capable of running JuiceDefender.</p> <p>SAMSUNG_PRIORART0000379 (Latedroid) (“JuiceDefender saves battery power (lots of it!) by controlling the device data connection and/or WiFi ... You can schedule regular APN/WiFi activation to let background data sync occur and have APN/WiFi enabled while the screen is on. It also helps in minimizing distractions.”)</p> <p>SAMSUNG_PRIORART0000361 (Purdy) (“Android: Most phones don't make it easy to switch cellular data connection on and off, even if doing so really helps save your battery. JuiceDefender toggles wireless data and Wi-Fi on and off every so often to preserve power.”)</p> <p><u>GreenPower App</u></p> <p>GreenPower is a mobile application (or “app”) intended to run on a mobile device, such an Android smartphone. The Nexus One is an example of an Android smartphone capable of running GreenPower.</p> <p><i>See, e.g.,</i> POUZERATE0000015 (GDG Oslo) at 5:</p>

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'433 Claims	Android Device with One or More Apps
	<div><h2>Background</h2><ul style="list-style-type: none">History of GreenPower app<ul style="list-style-type: none">2010: My first HTC heroMarch 2010: First Free version publishedOctober 2010: First Paid version publishedJan 2013:<ul style="list-style-type: none">1.3M downloads Free (>2500/day)200.000 active users<div><p>23.01.2013 - GDG Oslo - 5/35</p></div><p><i>See, e.g.,</i> POUZERATE0000002 (App Circus) at 9:</p></div>

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'433 Claims	Android Device with One or More Apps
	<p>Be mainstream</p> <ul style="list-style-type: none"> ▶ Cross Android versions <ul style="list-style-type: none"> ◦ Froyo ◦ Gingerbread ◦ Honeycomb ◦ Ice cream sandwich (as soon as someone offers me a Galaxy Nexus) ▶ Cross technologies <ul style="list-style-type: none"> ◦ GSM ◦ CDMA ◦ 2G, 3G, LTE ▶ 18 languages (not everybody speaks English, I know, I'm French) 
<p>[1a] a wireless wide area network (WWAN) modem to communicate data for Internet service activities between the device and at least one WWAN, when configured for and</p>	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><u>Nexus One</u></p> <p><i>See, e.g., SAMSUNG_PRIORART0000001 (Nexus) at 332:</i></p>

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'433 Claims	Android Device with One or More Apps	
connected to the at least one WWAN, the at least one WWAN having a corresponding network type of a plurality of wireless network types supported by the device for data communication;	Cellular & wireless	<p>Nexus One GSM phones compatible with 3G mobile networks from AT&T (U.S.) and Rogers Wireless (Canada): 3G UMTS bands I/II/V: 2100, 1900, 850 MHz</p> <p>Nexus One GSM phones compatible with 3G mobile networks from T-Mobile (U.S.): 3G UMTS bands I/IV/VIII: 2100, 1700(AWS), 900 MHz</p> <p>All Nexus One GSM phones: HSDPA 7.2Mbps HSUPA 2Mbps GSM/EDGE 850, 900, 1800, 1900 MHz Wi-Fi 802.11b/g Bluetooth 2.1 + EDR A2DP stereo Bluetooth</p>
	<u>JuiceDefender App</u>	
	<p>SAMSUNG_PRIORART0000379 (Latedroid) (“JuiceDefender saves battery power (lots of it!) by controlling the device data connection and/or WiFi ... You can schedule regular APN/WiFi activation to let background data sync occur and have APN/WiFi enabled while the screen is on. It also helps in minimizing distractions.”).</p> <p>SAMSUNG_PRIORART0000351 (Configuration-Translated) (“APN: activates / deactivates the APN connection, in its submenu we find the MMS button that activated configures the reception of MMS in the same way that we have the APN and Prefer Wifi that activated will try to connect first to this and if to five seconds does not find an available network will activate the APN. WIFI: activates / deactivates the WIFI connection, in its submenu we find the following buttons, Auto Disable turns off the wifi in the case of not finding a network available to save battery, in case it is deactivated we will have to activate it manually; Enable on Schedule / Peak / Screen will activate the wifi as we have configured those buttons that we will see below.”)</p>	

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'433 Claims	Android Device with One or More Apps
	<p>SAMSUNG_PRIORART0000361 (Purdy) ("Android: Most phones don't make it easy to switch cellular data connection on and off, even if doing so really helps save your battery. JuiceDefender toggles wireless data and Wi-Fi on and off every so often to preserve power.").</p> <p>SAMSUNG_PRIORART0000335 (Ruddock) ("Juice Defender is a battery conservation app. It uses various triggers, rules, and timers to control how often your device utilizes 3G/EDGE APN's (data connections) as well as WiFi. These data connections are the number one drainers of battery life when your phone is idle, so Juice Defender allows you to decide when, where, and how often you want them to be active.").</p> <p><u>GreenPower App</u></p> <p>POUZERATE0000196 (GreenPower User Guide) ("Manage Mobile Network If this setting is selected, then Green Power will regularly turn on and off the Mobile Network connection, based on the durations specified in the settings below.</p> <p>If this setting is not selected, then Green Power will leave the Mobile Network as it is, never turning it on or off.</p> <p>Please note that in order for Green Power to turn on / off Mobile Network, this one has to be manually enabled by the user first in the phone settings (Wireless & networks → Mobile Network) or in Green Power settings (Global wireless settings → Mobile Network) . Green Power can't itself turn on Mobile Network as this is a limitation of the Android system for security and cost reasons.").</p>
[1b] a non-transitory memory to store a network service activity control policy set, the policy set including at least a first	Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:

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

'433 Claims	Android Device with One or More Apps
differential traffic control policy element associating one or more Internet activity access controls with at least a first end-user application; and	<p><u>Nexus One</u></p> <p><i>See, e.g.,</i> SAMSUNG_PRIORART00000001 (Nexus) at 115-117:</p> <p>Configuring account sync and display options</p> <p>You can configure background data use and synchronization options for all of the applications on your phone. You can also configure what kinds of data you synchronize for each account. Some applications, such as Gmail and Calendar, have their own synchronization settings.</p> <p>Some applications, such as Contacts and Gmail, can sync data from multiple applications. Others, such as Calendar, sync data only from the first Google Account you sign into on your phone, or from an account associated specifically with that application.</p> <p>For some accounts, syncing is two-directional; changes that you make to the information on your phone are made to the copy of that information on the web. Your Google Account works this way. Other accounts support only one-way sync; the information on your phone is read-only.</p> <p>You can use the Contacts display options to configure the kinds of contacts that are displayed, as described in "Changing which contacts are displayed" on page 106.</p> <p>To configure general sync settings</p> <p>1 Open the Accounts & Sync Settings screen.</p> <p>You can do this in Contacts by pressing Menu  and touching Accounts, or directly in the Settings application (press Home , press Menu , and touch Settings).</p>

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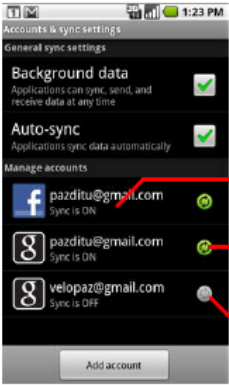


'433 Claims	Android Device with One or More Apps
	<p>The screen displays your current sync settings and a list of your current accounts.</p>  <p>Touch the account to configure.</p> <p>Some or all information from this account is configured to sync automatically with your phone.</p> <p>No information from this account syncs automatically with your phone.</p> <p> indicates that some or all of an account's information is configured to sync automatically with your phone.</p> <p> indicates that none of an account's information is configured to sync automatically with your phone.</p> <p>2 Check or uncheck Background data to control whether applications and services can transmit data when you are not working with them directly (that is, when they are running in the background).</p> <p>If you uncheck this option, Gmail stops receiving new mail, Calendar stops syncing events, and so on, until you touch the Refresh menu item or send an email.</p> <p>3 Check or uncheck Auto-sync to control whether changes you make to information on the phone or on the web are automatically synced with each other.</p> <p>For example, when this option is checked, changes that you make in Contacts on the phone are automatically made in Google Contacts on the web.</p> <p>If you uncheck this option, you may be able to use an application's tools to sync data manually. See "To sync information manually" on page 117.</p>

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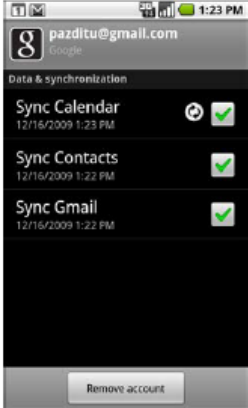
'433 Claims	Android Device with One or More Apps
	<p>To sync information manually</p> <ol style="list-style-type: none"> 1 Open the Accounts & Sync Settings screen. 2 Touch the account whose data you want to sync. 3 Press Menu  and touch Sync now. <p>To change an account's sync settings</p> <ol style="list-style-type: none"> 1 Open the Accounts & Sync Settings screen. 2 Touch the account whose sync settings you want to change. <p>The Data and Synchronization screen opens, displaying a list of the kinds of information the account can sync.</p> <p>Checked items are configured to sync to your phone.</p>  <ol style="list-style-type: none"> 3 Check or uncheck the kinds of information you want to sync to the phone. <p>Unchecking an option does not remove the information from your phone; it simply stops it from syncing automatically. To remove the information previously synced for the account, you must remove the account.</p> <p><i>See, e.g., SAMSUNG_PRIORART0000001 (Nexus) at 218:</i></p>

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	<p>Open in background Check to open new windows in the background when you touch & hold a link and touch Open in new window. This is useful when you are working with windows that take a long time to download and display. Press Menu ☰, touch Windows, and then touch the new window to view it. Uncheck if you prefer new windows that you open in this way to open in place of the current window. See "To switch Browser windows" on page 213.</p> <p>Set home page Opens a dialog where you can enter the URL of a page that you want to open whenever you open a new Browser window. If you prefer to open new Browser windows more quickly, by not opening any page by default, leave the dialog blank.</p> <p><i>See, e.g., SAMSUNG_PRIORART0000001 (Nexus) at 286:</i></p> <p>Refresh settings</p> <p>These settings control how frequently the information on the News & Weather widget is updated. In addition to using these settings, adding or removing the News & Weather widget from the Home screen also turns Auto-refresh on or off. For more about working with widgets, see "Customizing the Home screen" on page 58.</p> <p>Auto-refresh Check to have News & Weather update information automatically, at the frequency you set with Refresh interval. Uncheck to update the news and weather only when you press Menu ☰ and touch Refresh. For automatic refresh to work, you must also have Background Data turned on in the Settings application. See "Accounts & sync settings" on page 320.</p> <p><i>See, e.g., SAMSUNG_PRIORART0000001 (Nexus) at 320:</i></p>

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'433 Claims	Android Device with One or More Apps
	<p>Accounts & sync settings</p> <p>Use the Accounts & Sync settings to add, remove, and manage your Google and other supported accounts. You also use these settings to control how and whether all applications send, receive, and sync data on their own schedules, and whether all applications can synchronize user data automatically.</p> <p>Gmail, Calendar, and other applications may also have their own settings to control how they synchronize data; see the sections on those applications for details.</p> <p>Accounts & sync settings screen</p> <p>Background data Check to permit applications to synchronize data in the background, whether or not you are actively working in them. Unchecking this setting can save battery power and lowers (but does not eliminate) data use.</p> <p>Auto-sync Check to permit applications to synchronize data on their own schedule. If you uncheck this setting, you must touch an account in the list on this screen, press Menu , and touch Sync now to synchronize data for that account. Synchronizing data automatically is disabled if Background data is unchecked. In that case, the Auto-sync checkbox is dimmed.</p> <p>Manage accounts The rest of this screen lists the Google Accounts and other accounts you've added to the phone. Adding accounts is described in "Accounts" on page 111.</p> <p>If you touch an account in this screen, its account screen opens.</p> <p><u>JuiceDefender App</u></p> <p>SAMSUNG_PRIORART0000379 (Latedroid):</p>

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'433 Claims	Android Device with One or More Apps
	<div> <h2>JuiceDefender</h2> </div> <div> </div> <div> <p>JuiceDefender saves battery power (<i>lots of it!</i>) by controlling the device data connection and/or WiFi.</p> </div> <div> <p>You can schedule regular APN/WiFi activation to let background data sync occur and have APN/WiFi enabled while the screen is on. It also helps in minimizing distractions ;)</p> </div> <div> </div> <div> <p>The <i>Easy Mode</i> is a no-fuss one-click way to let your battery last longer - much longer. Just enable JuiceDefender by clicking on the big button and you're ready to go!</p> </div> <div> <p>If you want more fine-grained control, try <i>Advanced Mode</i>, where you can configure all</p> </div> <div> <p>JuiceDefender features to your liking.</p> </div>

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'433 Claims	Android Device with One or More Apps
	<p>There are 5 <i>triggers</i> for the enable/disable behaviour:</p> <p>Battery - when battery level gets low (less than 15%), disable APN/WiFi, and re-enable them when battery level is restored. APN/WiFi will also be enabled while the device is being recharged.</p> <p>Schedule - regularly enable APN/WiFi for a short period of time, to <i>let background data sync</i> occur (email, Twitter, Facebook, stock quotes...). If <i>Quick</i> is disabled APN/WiFi stays enabled for a longer period, useful if your data connection is very slow or you need to sync lots of data.</p> <p>Night schedule (requires <i>UltimateJuice</i>) - disable APN/WiFi during night time; you can also optionally put the phone in Silent Mode.</p> <p>Screen - enable APN/WiFi <i>while the screen is on</i> to allow browsing, tweeting, procrastination and general internet-powered enjoyment, regardless of scheduled events and battery level.</p> <p>Location (requires <i>UltimateJuice</i>) - this trigger controlled by the 'AutoWiFi' button. It disables WiFi when the device is not in range of any known WiFi network. The location is determined via the cellular network, so it's usually quite coarse. It's a fully automatic set-it-and-forget-it WiFi manager!</p> <p>The <i>priority order</i> of the triggers is 1) location (WiFi only), 2) screen, 3) battery, 4) night schedule, 5) schedule - this means, for example, that when the screen is on APN/WiFi will be enabled even when the battery is low, or that the regular schedule won't occur during the night period.</p> <p>SAMSUNG_PRIORART0000361 (Purdy):</p>

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'433 Claims	Android Device with One or More Apps
	<div> </div> <p>Android: Most phones don't make it easy to switch cellular data connection on and off, even if doing so really helps save your battery. JuiceDefender toggles wireless data and Wi-Fi on and off every so often to preserve power.</p> <p>The whole point of a smartphone with Google apps baked in is constant connectivity, of course, and you don't want to shut off access to your email, Google Voice messages, and other online services. But when you're walking around, at your office desk, and generally not actively using your phone, you probably don't need your phone to check in every minute with the mothership. JuiceDefender lets you set a time interval—5 minutes, 15, 30, an hour, two hours—at which its background process will re-enable your carrier APN, see if there are new messages or data coming in, and then shut off again. You can also set similar Wi-Fi connectivity rules, or only have web data enabled when you've got your screen on. Besides the battery savings,</p> <p>those who like to parse out their email checks and avoid minute-by-minute distractions see some benefit here, too.</p> <p><i>See, e.g.,</i> SAMSUNG_PRIORART0000351 (Configuration-Translated):</p> <div> <p>Schedule Enable APN for 5m every 30m</p> </div> <p>“• Schedule: used to configure how often Juice Defender will activate the APN / WIFI to synchronize emails, social networks, etc ..., we select the interval in the bar of your submenu for example 5 minutes every half hour also has the Quick button to minimize the connection time</p>

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	<p>for the previous example would be 2 minutes every half hour, I recommend not using this option if the selected time period is too short, it may not give you time to connect.”</p> <p><i>See, e.g.,</i> SAMSUNG_PRIORART0000361 (Purdy):</p> <div> <p>Schedule Enable APN+MMS 2m every 15m</p> </div> <p>“JuiceDefender lets you set a time interval—5 minutes, 15, 30, an hour, two hours— at which its background process will re-enable your carrier APN, see if there are new messages or data coming in, and then shut off again.”</p> <p><i>See, e.g.,</i> SAMSUNG_PRIORART0000335 (Ruddock):</p> <div> <p>Schedule Enable Data/WiFi for 1m every 15m</p> </div> <p><u>GreenPower App</u></p> <p>POUZERATE0000196 (GreenPower User Guide) (“Manage Wifi</p> <p>If this setting is selected, then Green Power will regularly turn on and off the Wifi connection, based on the durations specified in the settings below.</p> <p>If this setting is not selected, then Green Power will leave the Wifi as it is, never turning it on or off.</p> <p>Please note that if you manually switches off the Wifi, then Green Power will unselect the “Manage Wifi” setting in order not to automatically switch on the Wifi again despite your manual action. Then, if you switch back on the Wifi or reselect “Manage Wifi” setting, Green Power will resume managing Wifi connection.</p> <p>Manage Mobile Network</p>

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	<p>If this setting is selected, then Green Power will regularly turn on and off the Mobile Network connection, based on the durations specified in the settings below.</p> <p>If this setting is not selected, then Green Power will leave the Mobile Network as it is, never turning it on or off.</p> <p>Please note that in order for Green Power to turn on / off Mobile Network, this one has to be manually enabled by the user first in the phone settings (Wireless & networks → Mobile Network) or in Green Power settings (Global wireless settings → Mobile Network) . Green Power can't itself turn on Mobile Network as this is a limitation of the Android system for security and cost reasons.”).</p> <p>POUZERATE0000196 (GreenPower User Guide) (“Global Wireless settings This is a shortcut to the phone system wireless settings where the user can find the setting “Mobile Network”. That one should be checked or Green Power won't be able to properly manage Mobile Network.</p> <p>Screen off wireless delay This setting defines how long Green Power should wait before switching off wireless when the screen is turned off. Delaying turning off wireless is useful for instance if the user is reading something on the screen, not touching it. At some point the screen might turns off and you will touch it or press some buttons to switch it on again. Therefore, the wireless shouldn't be interrupted here. So, instead of switching off the wireless at once when the screen turns off, Green Power will wait that this delay elapses before switching off the wireless.</p> <p>Wireless on delay This setting defines how long Green Power keeps the wireless on before turning it off again. This applies to the Wifi is the setting “Manage Wifi” is selected, and this applies to the Mobile Network if the setting “Manage Mobile Network” is selected.</p>

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	<p>Wireless off delay This setting defines how long Green Power keeps the wireless off before turning it on again. This applies to the Wifi is the setting "Manage Wifi" is selected, and this applies to the Mobile Network if the setting "Manage Mobile Network" is selected.</p> <p>Screen on setting If this is selected, the wireless will be kept on when the screen is on. This applies to the Wifi is the setting "Manage Wifi" is selected, and this applies to the Mobile Network if the setting "Manage Mobile Network" is selected.</p> <p>If this is not selected, then Green Power will not make any difference whether the screen is on or off:: It will regularly switch on and off wireless if needed even if the screen is on. This can be useful if the you are using the phone for anything else than using wireless data (calling, playing local game, etc). In such a case you don't need the wireless to be always on.</p> <p>Power on setting If this is selected, the wireless will be kept on when the phone is connected to a power source. This applies to the Wifi is the setting "Manage Wifi" is selected, and this applies to the Mobile Network if the setting "Manage Mobile Network" is selected.</p> <p>This overrides the "Screen on setting": If this is selected and the power is connected, then wireless will be kept on whatever the screen state is.</p> <p>If this is not selected, then Green Power will not make any difference whether the phone is connected to the power or not:: It will regularly switch on and off wireless if needed.</p> <p>Check Traffic If this is selected, then prior to turning off wireless, Green Power will check that there is no network traffic. If there is, it will wait a few seconds and checks again until there is no traffic</p>

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	anymore.”)
<p>[1c] one or more processors configured to access the network service activity control policy set, determine whether to apply the one or more Internet activity access controls with respect to a first Internet access request by or on behalf of the first end-user application, based at least on which of the plurality of wireless network types is to provide data communication for Internet access requests, and when the one or more Internet activity access controls are to be applied, apply the one or more Internet activity access controls to aggregate network activity for the first Internet access request with network activity for one or more other data communication requests, which are otherwise not associated with the first end-user application, before allowing network activity in association with the first Internet access request.</p>	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g.,</i> the disclosures identified for claims [1b].</p>

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[2a] The wireless end-user device of claim 1, wherein the first end-user application is capable of both interacting with a user in a user interface foreground of the device, and at least some Internet service activities when not interacting with a user in the device user interface foreground,	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g.,</i> the disclosures identified for claims [1 pre]-[1c].</p>
[2b] the one or more processors further configured to classify whether the first end-user application is interacting with the user in the device user interface foreground, and determine whether to apply the one or more Internet activity access controls based also on the classification of whether the first end-user application is interacting with the user.	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g.,</i> the disclosures identified for claims [1 pre]-[1c].</p>
[3] The wireless end-user device of claim 2, wherein the one or more processors are configured to classify that the first end-user application is interacting with the user in the device user	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g.,</i> the disclosures identified for claims [1 pre]-[1c].</p>

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interface foreground when the user of the device is directly interacting with that application or perceiving any benefit from that application.	
[4] The wireless end-user device of claim 2, wherein the one or more processors are configured to classify that the first end-user application is interacting with the user in the device user interface foreground based on a state of user interface priority for the application.	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g.,</i> the disclosures identified for claims [1 pre]-[1c].</p>
[5] The wireless end-user device of claim 2, wherein the one or more processors are configured to classify that the first end-user application is not interacting with the user in the device user interface foreground when the application is providing or utilizing a background data service.	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g.,</i> the disclosures identified for claims [1 pre]-[1c].</p>
[6] The wireless end-user device of claim 2, wherein the one or more processors are configured	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p>

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'433 Claims	Android Device with One or More Apps
to apply the one or more Internet activity access controls such that, when the one or more Internet activity access controls are to be applied based on a classification that the first end-user application is not interacting with the user, network activity in association with the first Internet access request is delayed until a second Internet access request is received from or on behalf of an application that is classified as interacting with the user.	<i>See, e.g.,</i> the disclosures identified for claims [1 pre]-[1c].
[7] The wireless end-user device of claim 1, wherein the first differential traffic control policy element comprises an application list, and the one or more Internet activity access controls are associated with the first end-user application based on a determination as to whether the first end-user application is identified by the application list.	Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures: <i>See, e.g.,</i> the disclosures identified for claims [1 pre]-[1c].
[8] The wireless end-user device of claim 7, wherein the one or	Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:

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'433 Claims	Android Device with One or More Apps
more Internet activity access controls are further associated with a second end-user application based on a determination as to whether the second end-user application is identified by the application list.	<i>See, e.g.</i> , the disclosures identified for claims [1 pre]-[1c].
[9] The wireless end-user device of claim 1, further comprising a user interface, wherein the user interface is to inform the user of the device when there are options to set, control, override, or modify the one or more Internet activity access controls and/or the association of those access controls with the first end-user application.	Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures: <i>See, e.g.</i> , the disclosures identified for claims [1 pre]-[1c].
[10] The wireless end-user device of claim 1, wherein the one or more processors are further configured to select the first differential traffic control policy element from the network service activity control policy set based at least in part on which of the plurality of wireless network types is to provide data	Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures: <i>See, e.g.</i> , the disclosures identified for claims [1 pre]-[1c].

Exhibit G-10 to Defendants' Invalidity Contentions
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'433 Claims	Android Device with One or More Apps
communication for Internet access requests.	
<p>[11] The wireless end-user device of claim 10, further comprising a wireless local area network (WLAN) modem to communicate data for Internet service activities between the device and at least one WLAN, when configured for and connected to the at least one WLAN, wherein the one or more processors are further configured to, when the at least one WLAN is to provide data communication for Internet access requests, not apply the one or more Internet activity access controls.</p>	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g.,</i> the disclosures identified for claims [1 pre]-[1c].</p>
<p>[12] The wireless end-user device of claim 1, wherein the plurality of network types include a home WWAN type and a roaming WWAN type, the one or more processors configured to determine to apply the one or more Internet activity access controls to the roaming</p>	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g.,</i> the disclosures identified for claims [1 pre]-[1c].</p>

Exhibit G-10 to Defendants' Invalidity Contentions
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'433 Claims	Android Device with One or More Apps
WWAN type and not to the home WWAN type.	
[13] The wireless end-user device of claim 1, wherein the one or more processors are further configured to dynamically change the determination of whether to apply the one or more Internet activity access controls based on a power state of the device.	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g.,</i> the disclosures identified for claims [1 pre]-[1c].</p>
[14] The wireless end-user device of claim 1, wherein the one or more processors are further configured to dynamically change the determination of whether to apply the one or more Internet activity access controls based on a device usage state.	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g.,</i> the disclosures identified for claims [1 pre]-[1c].</p>
[15] The wireless end-user device of claim 1, wherein the one or more processors are further configured to dynamically change the determination of whether to apply the one or more Internet	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g.,</i> the disclosures identified for claims [1 pre]-[1c].</p>

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'433 Claims	Android Device with One or More Apps
activity access controls based on power control state changes for the WWAN modem.	
[16] The wireless end-user device of claim 1, wherein the one or more Internet activity access controls further limit the allowed network activity to particular time windows.	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g.,</i> the disclosures identified for claims [1 pre]-[1c].</p>
[17] The wireless end-user device of claim 1, wherein the one or more processors are further configured to update at least a portion of the network service activity control policy set based on information received from a network element.	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g.,</i> the disclosures identified for claims [1 pre]-[1c].</p>
[18] The wireless end-user device of claim 1, wherein the one or more Internet activity access controls further prevent the first Internet access request from causing a change to a power state of the modem.	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g.,</i> the disclosures identified for claims [1 pre]-[1c].</p>
[19] The wireless end-user device of claim 18, wherein	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p>

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'433 Claims	Android Device with One or More Apps
when the power state of the modem is idle or sleeping, the one or more Internet activity access controls prevent power state changes to the modem until a data communication request is received from a second end-user application for which the one or more Internet activity access controls do not apply.	<i>See, e.g.</i> , the disclosures identified for claims [1 pre]-[1c].
[20] The wireless end-user device of claim 1, wherein when the one or more Internet activity access controls are to be applied, the one or more processors are configured to instruct the first end-user application to transition to a different state.	Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures: <i>See, e.g.</i> , the disclosures identified for claims [1 pre]-[1c].

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Exhibit H-10

Based on Headwater's apparent positions as to the scope of the patent's claims, as best they can be deciphered, the reference(s) charted below anticipate(s) or at least render(s) obvious the identified claims. The portions of the prior art reference cited below are not exhaustive but are exemplary in nature.

This disclosure is not an admission that Samsung concedes any claim construction implied or suggested by Headwater's apparent positions as to the scope of the patent's claims, nor is it an admission by Samsung that any of its products are covered by or infringe the patent's claims, particularly when they are properly construed and applied. Samsung is not taking any claim construction positions through this disclosure, including whether the preamble is a limitation.

Samsung reserves the right to rely on additional citations or sources of evidence that also may be applicable, or that may become applicable in light of claim construction, changes in Headwater's infringement contentions, and/or information obtained during discovery as the case progresses. Samsung further reserves the right to amend or supplement this claim chart at a later date as more fully set forth in the Invalidity Contentions. For example, Defendants are currently in the process of taking discovery from non-parties including Nokia, HMD, Citrix, Google, Apple, and Microsoft. Accordingly, Defendants reserve the right to modify, amend, and/or supplement these contentions as information becomes available from non-parties.

Android is mobile device operating system that was initially released in September 2008. Applications (or "apps") can be installed on mobile devices that run Android. Any mobile device that predates the '544 patent, running an Android version with one or more apps that also predate the '544 patent, qualifies as prior art under at least pre-AIA 35 U.S.C. §§ 102(a)/(b). Such a device was known, used, offered for sale, and/or sold in the United States before the '544 patent.

Exemplary mobile devices that predate the '544 patent include:

- HTC Dream/T-Mobile G1 (released September 2008)
- Nexus One (released January 2010)

Exemplary Android versions that predate the '544 patent include:¹

¹ See, e.g., SAMSUNG_PRIORART0003998; SAMSUNG_PRIORART0004085; SAMSUNG_PRIORART0004081; SAMSUNG_PRIORART0004086; SAMSUNG_PRIORART0004083; SAMSUNG_PRIORART0004084.

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- Android 1.0 (released September 2008)
- Android 1.1 (released February 2009)
- Android Cupcake (1.5) (released April 2009)
- Android Donut (1.6) (released September 2009)
- Android Eclair (2.0, 2.0.1, 2.1) (released October 2009 - January 2010)
- Android Froyo (2.2) (released May 20, 2010)

Exemplary apps that predate the '544 patent include:²

- JuiceDefender (released January 2010) and its associated add-on application, UltimateJuice (collectively "JuiceDefender App")
- GreenPower (released March 2010)

As a specific example, a Nexus One mobile device running Android Froyo 2.2 with the JuiceDefender application installed qualifies as prior art under at least pre-AIA 35 U.S.C. §§ 102(a)/(b). This device was known, used, offered for sale, and/or sold in the United States on or before May 20, 2010. At least the various documents cited in this claim chart describe the functionality of this device.

To the extent it is argued that Android Device with One or More Apps does not disclose or include each and every asserted claim limitation, either expressly or inherently, it would have been obvious to a POSITA to incorporate any of the teachings from the references identified in Exhibits H-01 through H-11, and H-H (whose exemplary citations for each limitation are incorporated herein) into Android Device with One or More Apps. Indeed, it would have been obvious to make such combinations and a POSITA would have had reason and motivation to make such combinations at least for reasons described herein and in the cover pleading.

² See, e.g., SAMSUNG_PRIORART0000335-SAMSUNG_PRIORART0000383; POUZERATE0000001-POUZERATE0000261.

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'544 Claims	Android Device with One or More Apps
<p>[1 pre] A wireless end-user device, comprising:</p>	<p>To the extent the preamble is a limitation, Android Device with One or More Apps discloses and/or renders obvious this element. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><u>Nexus One</u> The Nexus One is an example of an Android smartphone.</p> <p><i>See, e.g., SAMSUNG_PRIORART0000001 (Nexus One User Guide) at 17:</i></p> <div> <p style="text-align: center;">Getting to know your phone</p> </div> <p><u>JuiceDefender App</u></p>

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'544 Claims	Android Device with One or More Apps
	<p>JuiceDefender is a mobile application (or “app”) intended to run on a mobile device, such an Android smartphone. The Nexus One is an example of an Android smartphone capable of running JuiceDefender.</p> <p>SAMSUNG_PRIORART0000379 (Latedroid) (“JuiceDefender saves battery power (lots of it!) by controlling the device data connection and/or WiFi ... You can schedule regular APN/WiFi activation to let background data sync occur and have APN/WiFi enabled while the screen is on. It also helps in minimizing distractions.”)</p> <p>SAMSUNG_PRIORART0000361 (Purdy) (“Android: Most phones don't make it easy to switch cellular data connection on and off, even if doing so really helps save your battery. JuiceDefender toggles wireless data and Wi-Fi on and off every so often to preserve power.”)</p> <p><u>GreenPower App</u></p> <p>GreenPower is a mobile application (or “app”) intended to run on a mobile device, such an Android smartphone. The Nexus One is an example of an Android smartphone capable of running GreenPower.</p> <p><i>See, e.g.,</i> POUZERATE00000015 (GDG Oslo) at 5:</p>

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'544 Claims	Android Device with One or More Apps
	<div><h2>Background</h2><ul style="list-style-type: none">History of GreenPower app<ul style="list-style-type: none">2010: My first HTC heroMarch 2010: First Free version publishedOctober 2010: First Paid version publishedJan 2013:<ul style="list-style-type: none">1.3M downloads Free (>2500/day)200.000 active users<div><p>23.01.2013 - GDG Oslo - 5/35</p></div><p><i>See, e.g.,</i> POUZERATE0000002 (App Circus) at 9:</p></div>

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'544 Claims	Android Device with One or More Apps
	<p>Be mainstream</p> <ul style="list-style-type: none"> ▶ Cross Android versions <ul style="list-style-type: none"> ◦ Froyo ◦ Gingerbread ◦ Honeycomb ◦ Ice cream sandwich (as soon as someone offers me a Galaxy Nexus) ▶ Cross technologies <ul style="list-style-type: none"> ◦ GSM ◦ CDMA ◦ 2G, 3G, LTE ▶ 18 languages (not everybody speaks English, I know, I'm French) 
<p>[1a] a wireless modem to communicate data for network service usage activities between the device and a wireless network;</p>	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><u>Nexus One</u></p> <p><i>See, e.g., SAMSUNG_PRIORART0000001 (Nexus) at 332:</i></p>

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'544 Claims	Android Device with One or More Apps		
	<table border="1"> <tr> <td>Cellular & wireless</td><td> <p>Nexus One GSM phones compatible with 3G mobile networks from AT&T (U.S.) and Rogers Wireless (Canada): 3G UMTS bands I/II/V: 2100, 1900, 850 MHz</p> <p>Nexus One GSM phones compatible with 3G mobile networks from T-Mobile (U.S.): 3G UMTS bands I/IV/VIII: 2100, 1700(AWS), 900 MHz</p> <p>All Nexus One GSM phones: HSDPA 7.2Mbps HSUPA 2Mbps GSM/EDGE 850, 900, 1800, 1900 MHz Wi-Fi 802.11b/g Bluetooth 2.1 + EDR A2DP stereo Bluetooth</p> </td></tr> </table> <p>SAMSUNG_PRIORART0000001 (Nexus) at 320:</p> <p>Accounts & sync settings screen</p> <p>Background data Check to permit applications to synchronize data in the background, whether or not you are actively working in them. Unchecking this setting can save battery power and lowers (but does not eliminate) data use.</p> <p>Auto-sync Check to permit applications to synchronize data on their own schedule. If you uncheck this setting, you must touch an account in the list on this screen, press Menu , and touch Sync now to synchronize data for that account. Synchronizing data automatically is disabled if Background data is unchecked. In that case, the Auto-sync checkbox is dimmed.</p>	Cellular & wireless	<p>Nexus One GSM phones compatible with 3G mobile networks from AT&T (U.S.) and Rogers Wireless (Canada): 3G UMTS bands I/II/V: 2100, 1900, 850 MHz</p> <p>Nexus One GSM phones compatible with 3G mobile networks from T-Mobile (U.S.): 3G UMTS bands I/IV/VIII: 2100, 1700(AWS), 900 MHz</p> <p>All Nexus One GSM phones: HSDPA 7.2Mbps HSUPA 2Mbps GSM/EDGE 850, 900, 1800, 1900 MHz Wi-Fi 802.11b/g Bluetooth 2.1 + EDR A2DP stereo Bluetooth</p>
Cellular & wireless	<p>Nexus One GSM phones compatible with 3G mobile networks from AT&T (U.S.) and Rogers Wireless (Canada): 3G UMTS bands I/II/V: 2100, 1900, 850 MHz</p> <p>Nexus One GSM phones compatible with 3G mobile networks from T-Mobile (U.S.): 3G UMTS bands I/IV/VIII: 2100, 1700(AWS), 900 MHz</p> <p>All Nexus One GSM phones: HSDPA 7.2Mbps HSUPA 2Mbps GSM/EDGE 850, 900, 1800, 1900 MHz Wi-Fi 802.11b/g Bluetooth 2.1 + EDR A2DP stereo Bluetooth</p>		

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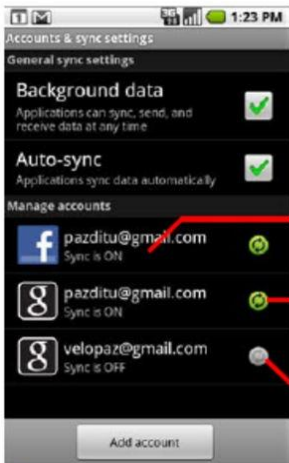


'544 Claims	Android Device with One or More Apps
	<p>SAMSUNG_PRIORART0000001 (Nexus) at 115-116 (“You can configure background data use and synchronization options for all of the applications on your phone. You can also configure what kinds of data you synchronize for each account. Some applications, such as Gmail and Calendar, have their own synchronization settings.”).</p> <p>SAMSUNG_PRIORART0000001 (Nexus) at 115-116: The screen displays your current sync settings and a list of your current accounts.</p>  <p>Touch the account to configure.</p> <p>Some or all information from this account is configured to sync automatically with your phone.</p> <p>No information from this account syncs automatically with your phone.</p> <p> indicates that some or all of an account's information is configured to sync automatically with your phone.</p> <p> indicates that none of an account's information is configured to sync automatically with your phone.</p> <p><u>JuiceDefender App</u></p> <p>SAMSUNG_PRIORART0000379 (Latedroid) (“JuiceDefender saves battery power (lots of it!) by controlling the device data connection and/or WiFi ... You can schedule regular APN/WiFi</p>

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'544 Claims	Android Device with One or More Apps
	<p>activation to let background data sync occur and have APN/WiFi enabled while the screen is on. It also helps in minimizing distractions.”).</p> <p>SAMSUNG_PRIORART0000351 (Configuration-Translated) (“APN: activates / deactivates the APN connection, in its submenu we find the MMS button that activated configures the reception of MMS in the same way that we have the APN and Prefer Wifi that activated will try to connect first to this and if to five seconds does not find an available network will activate the APN. WIFI: activates / deactivates the WIFI connection, in its submenu we find the following buttons, Auto Disable turns off the wifi in the case of not finding a network available to save battery, in case it is deactivated we will have to activate it manually; Enable on Schedule / Peak / Screen will activate the wifi as we have configured those buttons that we will see below.”)</p> <p>SAMSUNG_PRIORART0000361 (Purdy) (“Android: Most phones don't make it easy to switch cellular data connection on and off, even if doing so really helps save your battery. JuiceDefender toggles wireless data and Wi-Fi on and off every so often to preserve power.”).</p> <p>SAMSUNG_PRIORART0000335 (Ruddock) (“Juice Defender is a battery conservation app. It uses various triggers, rules, and timers to control how often your device utilizes 3G/EDGE APN's (data connections) as well as WiFi. These data connections are the number one drainers of battery life when your phone is idle, so Juice Defender allows you to decide when, where, and how often you want them to be active.”).</p> <p><u>GreenPower App</u></p> <p>POUZERATE0000196 (GreenPower User Guide) (“Manage Mobile Network If this setting is selected, then Green Power will regularly turn on and off the Mobile Network connection, based on the durations specified in the settings below.</p> <p>If this setting is not selected, then Green Power will leave the Mobile Network as it is, never turning it on or off.</p>

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'544 Claims	Android Device with One or More Apps		
	<p>Please note that in order for Green Power to turn on / off Mobile Network, this one has to be manually enabled by the user first in the phone settings (Wireless & networks → Mobile Network) or in Green Power settings (Global wireless settings → Mobile Network) . Green Power can't itself turn on Mobile Network as this is a limitation of the Android system for security and cost reasons.”).</p>		
<p>[1b] a processor that executes instructions to associate network service usage activity, on behalf of a first device application, and that occurs when the first device application is not in the foreground of user interaction, with a network service usage control policy,</p>	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g., SAMSUNG_PRIORART0000001 (Nexus) at 331:</i></p> <table border="1"> <tr> <td>Processor</td><td>Qualcomm QSD 8250, 1 GHz</td></tr> </table> <p><i>See, e.g., SAMSUNG_PRIORART0000001 (Nexus) at 320:</i></p> <p>Accounts & sync settings screen</p> <p>Background data Check to permit applications to synchronize data in the background, whether or not you are actively working in them. Unchecking this setting can save battery power and lowers (but does not eliminate) data use.</p> <p>Auto-sync Check to permit applications to synchronize data on their own schedule. If you uncheck this setting, you must touch an account in the list on this screen, press Menu ☰, and touch Sync now to synchronize data for that account. Synchronizing data automatically is disabled if Background data is unchecked. In that case, the Auto-sync checkbox is dimmed.</p>	Processor	Qualcomm QSD 8250, 1 GHz
Processor	Qualcomm QSD 8250, 1 GHz		

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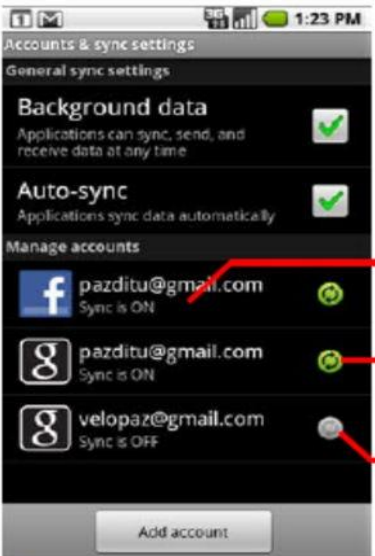


'544 Claims	Android Device with One or More Apps
	<p>SAMSUNG_PRIORART0000001 (Nexus) at 115-116 (“You can configure background data use and synchronization options for all of the applications on your phone. You can also configure what kinds of data you synchronize for each account. Some applications, such as Gmail and Calendar, have their own synchronization settings.”).</p> <p>SAMSUNG_PRIORART0000001 (Nexus) at 115-116: The screen displays your current sync settings and a list of your current accounts.</p>  <p>Touch the account to configure.</p> <p>Some or all information from this account is configured to sync automatically with your phone.</p> <p>No information from this account syncs automatically with your phone.</p> <p> indicates that some or all of an account's information is configured to sync automatically with your phone.</p> <p> indicates that none of an account's information is configured to sync automatically with your phone.</p>

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'544 Claims	Android Device with One or More Apps
<p>[1c] set an application state indicating whether the first device application, associated with a particular network service usage activity, is in the foreground of user interaction, and</p>	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g.,</i> SAMSUNG_PRIORART0000001 (Nexus) at 320:</p> <p>Accounts & sync settings screen</p> <p>Background data Check to permit applications to synchronize data in the background, whether or not you are actively working in them. Unchecking this setting can save battery power and lowers (but does not eliminate) data use.</p> <p>Auto-sync Check to permit applications to synchronize data on their own schedule. If you uncheck this setting, you must touch an account in the list on this screen, press Menu ☰, and touch Sync now to synchronize data for that account. Synchronizing data automatically is disabled if Background data is unchecked. In that case, the Auto-sync checkbox is dimmed.</p> <p>SAMSUNG_PRIORART0000001 (Nexus) at 115-116 (“You can configure background data use and synchronization options for all of the applications on your phone. You can also configure what kinds of data you synchronize for each account. Some applications, such as Gmail and Calendar, have their own synchronization settings.”).</p> <p>SAMSUNG_PRIORART0000001 (Nexus) at 115-116:</p>

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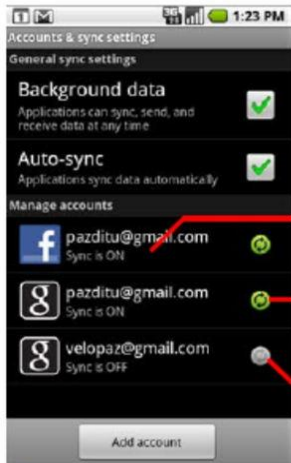


'544 Claims	Android Device with One or More Apps
	<p>The screen displays your current sync settings and a list of your current accounts.</p>  <p>Touch the account to configure.</p> <p>Some or all information from this account is configured to sync automatically with your phone.</p> <p>No information from this account syncs automatically with your phone.</p> <p> indicates that some or all of an account's information is configured to sync automatically with your phone.</p> <p> indicates that none of an account's information is configured to sync automatically with your phone.</p> <p>SAMSUNG_PRIORART0000001 (Nexus) at 318:</p>

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

'544 Claims	Android Device with One or More Apps
	<p>Manage applications Opens a list of all the applications and other software installed on your phone, along with their sizes. By default, only downloaded applications are shown, and they are sorted in alphabetical order. Press Menu  and touch Filter to change the list to show all applications, only running applications, or only downloaded applications. Press Menu  and touch Sort by size to display applications in order by size. Touch an application to open its Application Info screen. See "Application Info screen" on page 318.</p> <p>Running services Opens a list of services—applications or parts of applications that provide services to other applications or that run even when their main application isn't running. Examples include the Android onscreen keyboard and the small portion of Google Talk that always listens for incoming messages. Above each service, one or more gray bars show what processes the running service needs and how much memory it's using (how much memory you would recover if you stopped the service). Depending on the service, when you touch it in the list it either opens a dialog in which you can stop it or opens its Settings screen.</p>
[1d] dynamically determine whether to apply the network service usage control policy to the particular network service usage activity, based on the application state and based on a power control state; and	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><u>Nexus One</u></p> <p><i>See, e.g., SAMSUNG_PRIORART00000001 (Nexus) at 320:</i></p>

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'544 Claims	Android Device with One or More Apps
	<p>Accounts & sync settings screen</p> <p>Background data Check to permit applications to synchronize data in the background, whether or not you are actively working in them. Unchecking this setting can save battery power and lowers (but does not eliminate) data use.</p> <p>Auto-sync Check to permit applications to synchronize data on their own schedule. If you uncheck this setting, you must touch an account in the list on this screen, press Menu ☰, and touch Sync now to synchronize data for that account. Synchronizing data automatically is disabled if Background data is unchecked. In that case, the Auto-sync checkbox is dimmed.</p> <p>SAMSUNG_PRIORART0000001 (Nexus) at 115-116 (“You can configure background data use and synchronization options for all of the applications on your phone. You can also configure what kinds of data you synchronize for each account. Some applications, such as Gmail and Calendar, have their own synchronization settings.”).</p> <p>SAMSUNG_PRIORART0000001 (Nexus) at 115-116:</p>

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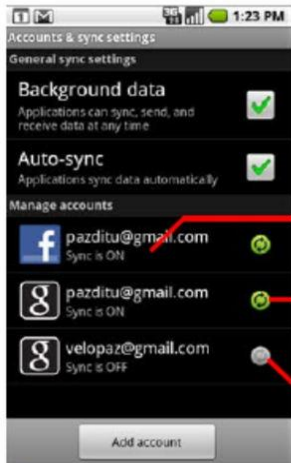


'544 Claims	Android Device with One or More Apps
	<p>The screen displays your current sync settings and a list of your current accounts.</p>  <p>Touch the account to configure.</p> <p>Some or all information from this account is configured to sync automatically with your phone.</p> <p>No information from this account syncs automatically with your phone.</p> <p> indicates that some or all of an account's information is configured to sync automatically with your phone.</p> <p> indicates that none of an account's information is configured to sync automatically with your phone.</p> <p>SAMSUNG_PRIORART0000001 (Nexus) at 318:</p>

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
'544 Claims	Android Device with One or More Apps
	<p>Manage applications Opens a list of all the applications and other software installed on your phone, along with their sizes. By default, only downloaded applications are shown, and they are sorted in alphabetical order. Press Menu  and touch Filter to change the list to show all applications, only running applications, or only downloaded applications. Press Menu  and touch Sort by size to display applications in order by size. Touch an application to open its Application Info screen. See "Application Info screen" on page 318.</p> <p>Running services Opens a list of services—applications or parts of applications that provide services to other applications or that run even when their main application isn't running. Examples include the Android onscreen keyboard and the small portion of Google Talk that always listens for incoming messages. Above each service, one or more gray bars show what processes the running service needs and how much memory it's using (how much memory you would recover if you stopped the service). Depending on the service, when you touch it in the list it either opens a dialog in which you can stop it or opens its Settings screen.</p> <p><u>JuiceDefender App</u></p> <p>SAMSUNG_PRIORART0000379 (Latedroid):</p>

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'544 Claims	Android Device with One or More Apps
	<div> <h2>JuiceDefender</h2> </div> <div> </div> <div> <p>JuiceDefender saves battery power (<i>lots of it!</i>) by controlling the device data connection and/or WiFi.</p> </div> <div> <p>You can schedule regular APN/WiFi activation to let background data sync occur and have APN/WiFi enabled while the screen is on. It also helps in minimizing distractions ;)</p> </div> <div> </div> <div> <p>The <i>Easy Mode</i> is a no-fuss one-click way to let your battery last longer - much longer. Just enable JuiceDefender by clicking on the big button and you're ready to go!</p> </div> <div> <p>If you want more fine-grained control, try <i>Advanced Mode</i>, where you can configure all</p> </div> <div> <p>JuiceDefender features to your liking.</p> </div>

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'544 Claims	Android Device with One or More Apps
	<p>There are 5 <i>triggers</i> for the enable/disable behaviour:</p> <p>Battery - when battery level gets low (less than 15%), disable APN/WiFi, and re-enable them when battery level is restored. APN/WiFi will also be enabled while the device is being recharged.</p> <p>Schedule - regularly enable APN/WiFi for a short period of time, to <i>let background data sync</i> occur (email, Twitter, Facebook, stock quotes...). If <i>Quick</i> is disabled APN/WiFi stays enabled for a longer period, useful if your data connection is very slow or you need to sync lots of data.</p> <p>Night schedule (requires <i>UltimateJuice</i>) - disable APN/WiFi during night time; you can also optionally put the phone in Silent Mode.</p> <p>Screen - enable APN/WiFi <i>while the screen is on</i> to allow browsing, tweeting, procrastination and general internet-powered enjoyment, regardless of scheduled events and battery level.</p> <p>Location (requires <i>UltimateJuice</i>) - this trigger controlled by the <i>'AutoWiFi'</i> button. It disables WiFi when the device is not in range of any known WiFi network. The location is determined via the cellular network, so it's usually quite coarse. It's a fully automatic set-it-and-forget-it WiFi manager!</p> <p>The <i>priority order</i> of the triggers is 1) location (WiFi only), 2) screen, 3) battery, 4) night schedule, 5) schedule - this means, for example, that when the screen is on APN/WiFi will be enabled even when the battery is low, or that the regular schedule won't occur during the night period.</p> <p>SAMSUNG_PRIORART0000361 (Purdy):</p>

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'544 Claims	Android Device with One or More Apps
	<div> </div> <p>Android: Most phones don't make it easy to switch cellular data connection on and off, even if doing so really helps save your battery. JuiceDefender toggles wireless data and Wi-Fi on and off every so often to preserve power.</p> <p>The whole point of a smartphone with Google apps baked in is constant connectivity, of course, and you don't want to shut off access to your email, Google Voice messages, and other online services. But when you're walking around, at your office desk, and generally not actively using your phone, you probably don't need your phone to check in every minute with the mothership. JuiceDefender lets you set a time interval—5 minutes, 15, 30, an hour, two hours—at which its background process will re-enable your carrier APN, see if there are new messages or data coming in, and then shut off again. You can also set similar Wi-Fi connectivity rules, or only have web data enabled when you've got your screen on. Besides the battery savings,</p> <p>those who like to parse out their email checks and avoid minute-by-minute distractions see some benefit here, too.</p> <p>SAMSUNG_PRIORART0000361 (Purdy):</p>

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'544 Claims	Android Device with One or More Apps
	 <p>SAMSUNG_PRIORART0000351 (Configuration-Translated):</p>

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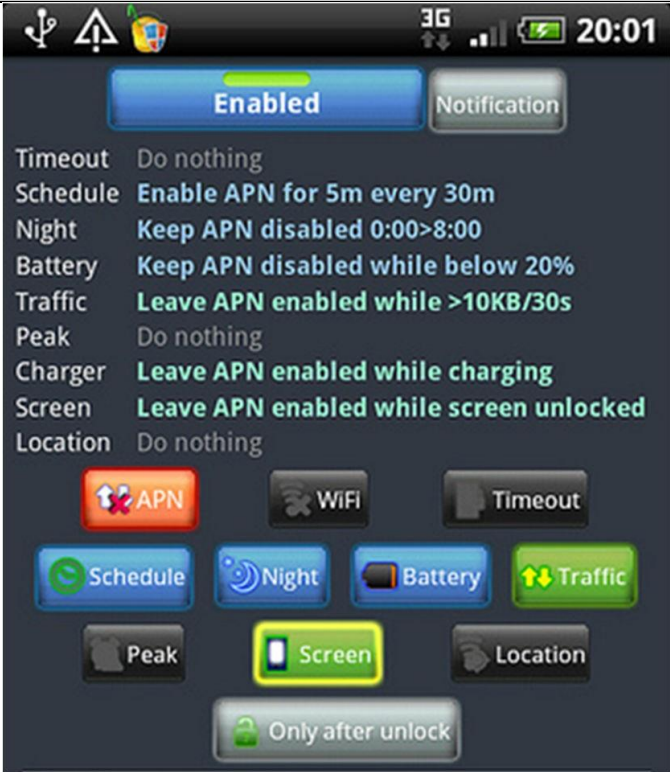
'544 Claims	Android Device with One or More Apps
	<div></div> <p>SAMSUNG_PRIORART0000335 (Ruddock):</p>

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'544 Claims	Android Device with One or More Apps
	 <p>SAMSUNG_PRIORART0000351 (Configuration-Translated) (“Battery: it deactivates the APN / WIFI connection when the battery reaches the percentage that we select for example 20%, in its</p>

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'544 Claims	Android Device with One or More Apps
	<p>submenu we find the Charger button that activating it keeps the connections active while the phone is plugged into the charger.”).</p> <p><u>GreenPower App</u></p> <p>POUZERATE0000196 (GreenPower User Guide) (“Manage Wifi If this setting is selected, then Green Power will regularly turn on and off the Wifi connection, based on the durations specified in the settings below.</p> <p>If this setting is not selected, then Green Power will leave the Wifi as it is, never turning it on or off.</p> <p>Please note that if you manually switches off the Wifi, then Green Power will unselect the “Manage Wifi” setting in order not to automatically switch on the Wifi again despite your manual action. Then, if you switch back on the Wifi or reselect “Manage Wifi” setting, Green Power will resume managing Wifi connection.</p> <p>Manage Mobile Network If this setting is selected, then Green Power will regularly turn on and off the Mobile Network connection, based on the durations specified in the settings below.</p> <p>If this setting is not selected, then Green Power will leave the Mobile Network as it is, never turning it on or off.</p> <p>Please note that in order for Green Power to turn on / off Mobile Network, this one has to be manually enabled by the user first in the phone settings (Wireless & networks → Mobile Network) or in Green Power settings (Global wireless settings → Mobile Network) . Green Power can't itself turn on Mobile Network as this is a limitation of the Android system for security and cost reasons.”).</p>

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'544 Claims	Android Device with One or More Apps
	<p>POUZERATE0000196 (GreenPower User Guide) ("Global Wireless settings This is a shortcut to the phone system wireless settings where the user can find the setting "Mobile Network". That one should be checked or Green Power won't be able to properly manage Mobile Network.</p> <p>Screen off wireless delay This setting defines how long Green Power should wait before switching off wireless when the screen is turned off. Delaying turning off wireless is useful for instance if the user is reading something on the screen, not touching it. At some point the screen might turns off and you will touch it or press some buttons to switch it on again. Therefore, the wireless shouldn't be interrupted here. So, instead of switching off the wireless at once when the screen turns off, Green Power will wait that this delay elapses before switching off the wireless.</p> <p>Wireless on delay This setting defines how long Green Power keeps the wireless on before turning it off again. This applies to the Wifi is the setting "Manage Wifi" is selected, and this applies to the Mobile Network if the setting "Manage Mobile Network" is selected.</p> <p>Wireless off delay This setting defines how long Green Power keeps the wireless off before turning it on again. This applies to the Wifi is the setting "Manage Wifi" is selected, and this applies to the Mobile Network if the setting "Manage Mobile Network" is selected.</p> <p>Screen on setting If this is selected, the wireless will be kept on when the screen is on. This applies to the Wifi is the setting "Manage Wifi" is selected, and this applies to the Mobile Network if the setting "Manage Mobile Network" is selected.</p> <p>If this is not selected, then Green Power will not make any difference whether the screen is on or</p>

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'544 Claims	Android Device with One or More Apps
	<p>off:: It will regularly switch on and off wireless if needed even if the screen is on. This can be useful if the you are using the phone for anything else than using wireless data (calling, playing local game, etc). In such a case you don't need the wireless to be always on.</p> <p>Power on setting If this is selected, the wireless will be kept on when the phone is connected to a power source. This applies to the Wifi is the setting "Manage Wifi" is selected, and this applies to the Mobile Network if the setting "Manage Mobile Network" is selected.</p> <p>This overrides the "Screen on setting": If this is selected and the power is connected, then wireless will be kept on whatever the screen state is.</p> <p>If this is not selected, then Green Power will not make any difference whether the phone is connected to the power or not:: It will regularly switch on and off wireless if needed.</p> <p>Check Traffic If this is selected, then prior to turning off wireless, Green Power will check that there is no network traffic. If there is, it will wait a few seconds and checks again until there is no traffic anymore.")</p>
[1e] a memory coupled to the processor to provide the processor with the instructions	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p>Android devices, such as the Nexus One, include memory to store instructions provided by mobile apps.</p> <p><i>See, e.g., SAMSUNG_PRIORART0000001 (Nexus) at 331:</i></p>

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'544 Claims	Android Device with One or More Apps		
	<table border="1"> <tr> <td>Storage</td><td>Flash memory: 512MB RAM: 512MB microSD card: 4GB microSD card included (expandable to 32GB)</td></tr> </table>	Storage	Flash memory: 512MB RAM: 512MB microSD card: 4GB microSD card included (expandable to 32GB)
Storage	Flash memory: 512MB RAM: 512MB microSD card: 4GB microSD card included (expandable to 32GB)		
<p>[2] The wireless end-user device of claim 1, wherein the processor executing the instructions determines that the first device application is in the foreground of user interaction when the user of the device is directly interacting with that application or perceiving any benefit from that application.</p>	<p>Android Device with One or More Apps Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g.,</i> the disclosures identified for claims [1b]-[1d].</p>		
<p>[3] The wireless end-user device of claim 1, wherein the processor executing the instructions determines that the first device application is in the foreground of user interaction based on a state of user interface priority for the application.</p>	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g.,</i> the disclosures identified for claims [1b]-[1d].</p>		

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'544 Claims	Android Device with One or More Apps
<p>[4] The wireless end-user device of claim 1, wherein when the network service usage control policy is applied it disallows the particular network service usage activity, and wherein the processor executes the instruction further to, when it is determined that the particular network access request is disallowed, queue that particular network service usage activity until a power state change occurs.</p>	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g.,</i> the disclosures identified for claims [1b]-[1d].</p>
<p>[5] The wireless end-user device recited in claim 1, wherein the processor executes the instructions further to: implement the network service usage control policy at least in part via communication with the first device application through an emulated network access API that indicates to the first device application that an available wireless network is unavailable when a dynamic</p>	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g.,</i> the disclosures identified for claims [1b]-[1d].</p>

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'544 Claims	Android Device with One or More Apps
determination applies the network service usage control policy to the particular network service usage activity.	
[6] The wireless end-user device of claim 1, wherein the processor further executes the instruction to, for at least a second device application or service, allow network service usage activities without regard to the power control state.	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g.,</i> the disclosures identified for claims [1b]-[1d].</p>
[7] The wireless end-user device of claim 1, wherein the power control state is a power state of the device.	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g.,</i> the disclosures identified for claims [1b]-[1d].</p>
[8] The wireless end-user device recited in claim 1, wherein the processor executes the instructions further to: execute a router for dynamically managing one or more network capacity controlled services and/or QoS sessions for the wireless end-user device.	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g.,</i> the disclosures identified for claims [1b]-[1d].</p>

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'544 Claims	Android Device with One or More Apps
<p>[11] The wireless end-user device recited in claim 1, wherein dynamically determining whether to apply the network service usage control policy to the particular network service usage activity is further based on a current wireless network and/or the network service usage control policy is based on a current wireless network.</p>	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g.,</i> the disclosures identified for claims [1b]-[1d].</p>
<p>[12] The wireless end-user device recited in claim 1, wherein dynamically determining whether to apply the network service usage control policy to the particular network service usage activity further includes dynamically assigning a network capacity controlled services priority level to the particular network service usage activity based on a network busy state.</p>	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g.,</i> the disclosures identified for claims [1b]-[1d].</p>
<p>[13] The wireless end-user device recited in claim 1,</p>	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p>

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'544 Claims	Android Device with One or More Apps
wherein associating includes querying a network element for determining an association of the first device application with the network service usage control policy.	<i>See, e.g.</i> , the disclosures identified for claims [1b]-[1d].
[14] The wireless end-user device recited in claim 1, wherein the network service usage control policy includes one or more of the following: block/allow settings, throttle settings, adaptive throttle settings, QoS class settings, packet error rate, jitter and delay settings, queue settings, and tag settings.	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g.</i>, the disclosures identified for claims [1b]-[1d].</p>
[15] The wireless end-user device recited in claim 1, wherein the network service usage control policy includes traffic control policy filters, the filters comprising a first filter specifying applicability of the policy only when the first device application is not in the foreground of user interaction, and a second filter	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g.</i>, the disclosures identified for claims [1b]-[1d] and 7.</p>

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'544 Claims	Android Device with One or More Apps
specifying applicability of the policy only in one or more specific power control states.	
[16] The wireless end-user device recited in claim 1, wherein the network service usage control policy includes traffic control policy filters implemented as cascading filters.	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g.,</i> the disclosures identified for claims [1b]-[1d].</p>
[17] The wireless end-user device recited in claim 1, wherein the network service usage control policy includes traffic control policy filters using a network busy state and/or a time of day as an index into a traffic control setting.	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g.,</i> the disclosures identified for claims [1b]-[1d] and [12].</p>
[18] The wireless end-user device recited in claim 1, wherein the processor executes the instructions further to: differentially control the particular network service usage activity based on the network service usage	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g.,</i> the disclosures identified for claims [1b]-[1d] and [12].</p>

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'544 Claims	Android Device with One or More Apps
control policy based on a network busy state.	
[19] The wireless end-user device recited in claim 1, wherein the processor executes the instructions further to: differentially control the particular network service usage activity based on the network service usage control policy based on a user input and/or a current wireless network.	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g.,</i> the disclosures identified for claims [1b]-[1d] and [11].</p>
[20] The wireless end-user device recited in claim 1, wherein the processor executes the instructions further to: modify or replace a network stack interface of the wireless end-user device to provide for intercept or discontinuance of network access messaging for implementing traffic control of the particular network service usage activity.	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g.,</i> the disclosures identified for claims [1b]-[1d].</p>

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'544 Claims	Android Device with One or More Apps
[21] The wireless end-user device recited in claim 1, wherein the processor executes the instructions further to: store a network capacity controlled service list, wherein the network capacity controlled service list is periodically updated based on monitored network service usage activities.	Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures: <i>See, e.g.,</i> the disclosures identified for claims [1b]-[1d].
[22] The wireless end-user device of claim 1, wherein the power control state is a power save state of the device.	Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures: <i>See, e.g.,</i> the disclosures identified for claims [1b]-[1d].
[23] The wireless end-user device of claim 1, wherein the power control state is a power state of the wireless modem.	Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures: <i>See, e.g.,</i> the disclosures identified for claims [1b]-[1d].

Exhibit I-10 to Defendants' Invalidity Contentions
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Exhibit I-10

Based on Headwater's apparent positions as to the scope of the patent's claims, as best they can be deciphered, the reference(s) charted below anticipate(s) or at least render(s) obvious the identified claims. The portions of the prior art reference cited below are not exhaustive but are exemplary in nature.

This disclosure is not an admission that Samsung concedes any claim construction implied or suggested by Headwater's apparent positions as to the scope of the patent's claims, nor is it an admission by Samsung that any of its products are covered by or infringe the patent's claims, particularly when they are properly construed and applied. Samsung is not taking any claim construction positions through this disclosure, including whether the preamble is a limitation.

Samsung reserves the right to rely on additional citations or sources of evidence that also may be applicable, or that may become applicable in light of claim construction, changes in Headwater's infringement contentions, and/or information obtained during discovery as the case progresses. Samsung further reserves the right to amend or supplement this claim chart at a later date as more fully set forth in the Invalidity Contentions. For example, Defendants are currently in the process of taking discovery from non-parties including Nokia, HMD, Citrix, Google, Apple, and Microsoft. Accordingly, Defendants reserve the right to modify, amend, and/or supplement these contentions as information becomes available from non-parties.

Android is mobile device operating system that was initially released in September 2008. Applications (or "apps") can be installed on mobile devices that run Android. Any mobile device that predates the '773 patent, running an Android version with one or more apps that also predate the '773 patent, qualifies as prior art under at least pre-AIA 35 U.S.C. §§ 102(a)/(b). Such a device was known, used, offered for sale, and/or sold in the United States before the '773 patent.

Exemplary mobile devices that predate the '773 patent include:

- HTC Dream/T-Mobile G1 (released September 2008)
- Nexus One (released January 2010)

Exemplary Android versions that predate the '773 patent include: ¹

¹ See, e.g., SAMSUNG_PRIORART0003998; SAMSUNG_PRIORART0004085; SAMSUNG_PRIORART0004081; SAMSUNG_PRIORART0004086; SAMSUNG_PRIORART0004083; SAMSUNG_PRIORART0004084.

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- Android 1.0 (released September 2008)
- Android 1.1 (released February 2009)
- Android Cupcake (1.5) (released April 2009)
- Android Donut (1.6) (released September 2009)
- Android Eclair (2.0, 2.0.1, 2.1) (released October 2009 - January 2010)
- Android Froyo (2.2) (released May 20, 2010)

Exemplary apps that predate the '773 patent include:²

- JuiceDefender (released January 2010) and its associated add-on application, UltimateJuice (collectively "JuiceDefender App")
- GreenPower (released March 2010)

As a specific example, a Nexus One mobile device running Android Froyo 2.2 with the JuiceDefender application installed qualifies as prior art under at least pre-AIA 35 U.S.C. §§ 102(a)/(b). This device was known, used, offered for sale, and/or sold in the United States on or before May 20, 2010. At least the various documents cited in this claim chart describe the functionality of this device.

To the extent it is argued that Android Device with One or More Apps does not disclose or include each and every asserted claim limitation, either expressly or inherently, it would have been obvious to a POSITA to incorporate any of the teachings from the references identified in Exhibits I-01 through I-11, and I-I (whose exemplary citations for each limitation are incorporated herein) into Android Device with One or More Apps. Indeed, it would have been obvious to make such combinations and a POSITA would have had reason and motivation to make such combinations at least for reasons described herein and in the cover pleading.

² See, e.g., SAMSUNG_PRIORART0000335-SAMSUNG_PRIORART0000383; POUZERATE0000001-POUZERATE0000261.

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'773 Claims	Android Device with One or More Apps
<p>[1pre] A wireless end-user device, comprising:</p>	<p>To the extent the preamble is a limitation, Android Device and JuiceDefender discloses and/or renders obvious this element. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><u>Nexus One</u></p> <p>The Nexus One is an example of an Android smartphone.</p> <p>See, e.g., SAMSUNG_PRIORART0000001 (Nexus) at 17:</p> <div> <p style="text-align: center;">Getting to know your phone</p> </div> <p><u>JuiceDefender App</u></p> <p>JuiceDefender is a mobile application (or “app”) intended to run on a mobile device, such an Android smartphone.</p>

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U.S. Patent No. 10,237,773

'773 Claims	Android Device with One or More Apps
	<p>SAMSUNG_PRIORART0000379 (Latedroid) (“JuiceDefender saves battery power (lots of it!) by controlling the device data connection and/or WiFi ... You can schedule regular APN/WiFi activation to let background data sync occur and have APN/WiFi enabled while the screen is on. It also helps in minimizing distractions.”)</p> <p>SAMSUNG_PRIORART0000361 (Purdy) (“Android: Most phones don't make it easy to switch cellular data connection on and off, even if doing so really helps save your battery. JuiceDefender toggles wireless data and Wi-Fi on and off every so often to preserve power.”)</p> <p><u>GreenPower App</u></p> <p>GreenPower is a mobile application (or “app”) intended to run on a mobile device, such an Android smartphone. The Nexus One is an example of an Android smartphone capable of running GreenPower.</p> <p><i>See, e.g.,</i> POUZERATE0000015 (GDG Oslo) at 5:</p>

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'773 Claims	Android Device with One or More Apps
	<div><h2>Background</h2><ul style="list-style-type: none">History of GreenPower app<ul style="list-style-type: none">2010: My first HTC heroMarch 2010: First Free version publishedOctober 2010: First Paid version publishedJan 2013:<ul style="list-style-type: none">1.3M downloads Free (>2500/day)200.000 active users<div><p>23.01.2013 - GDG Oslo - 5/35</p></div><p><i>See, e.g.,</i> POUZERATE0000002 (App Circus) at 9:</p></div>

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'773 Claims	Android Device with One or More Apps
	<p>Be mainstream</p> <ul style="list-style-type: none"> ▶ Cross Android versions <ul style="list-style-type: none"> ◦ Froyo ◦ Gingerbread ◦ Honeycomb ◦ Ice cream sandwich (as soon as someone offers me a Galaxy Nexus) ▶ Cross technologies <ul style="list-style-type: none"> ◦ GSM ◦ CDMA ◦ 2G, 3G, LTE ▶ 18 languages (not everybody speaks English, I know, I'm French) 
[1a] a processor;	<p>Android Device with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p>Android devices, such as the Nexus One, include a processor to execute instructions provided by mobile apps, such as JuiceDefender.</p> <p><i>See, e.g., SAMSUNG_PRIORART0000001 (Nexus) at 331:</i></p>

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'773 Claims	Android Device with One or More Apps		
	<table border="1"> <tr> <td>Processor</td><td>Qualcomm QSD 8250, 1 GHz</td></tr> </table>	Processor	Qualcomm QSD 8250, 1 GHz
Processor	Qualcomm QSD 8250, 1 GHz		
<p>[1b] a Wireless Wide-Area Network (WWAN) modem, to communicate data for network service usage activities between the wireless end-user device and a WWAN; and</p>	<p>Android Device and with One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><u>Nexus One</u></p> <p><i>See, e.g., SAMSUNG_PRIORART0000001 (Nexus) at 332:</i></p> <table border="1"> <tr> <td>Cellular & wireless</td><td> <p>Nexus One GSM phones compatible with 3G mobile networks from AT&T (U.S.) and Rogers Wireless (Canada): 3G UMTS bands I/II/V: 2100, 1900, 850 MHz</p> <p>Nexus One GSM phones compatible with 3G mobile networks from T-Mobile (U.S.): 3G UMTS bands I/IV/VIII: 2100, 1700(AWS), 900 MHz</p> <p>All Nexus One GSM phones: HSDPA 7.2Mbps HSUPA 2Mbps GSM/EDGE 850, 900, 1800, 1900 MHz Wi-Fi 802.11b/g Bluetooth 2.1 + EDR A2DP stereo Bluetooth</p> </td></tr> </table> <p><u>JuiceDefender App</u></p>	Cellular & wireless	<p>Nexus One GSM phones compatible with 3G mobile networks from AT&T (U.S.) and Rogers Wireless (Canada): 3G UMTS bands I/II/V: 2100, 1900, 850 MHz</p> <p>Nexus One GSM phones compatible with 3G mobile networks from T-Mobile (U.S.): 3G UMTS bands I/IV/VIII: 2100, 1700(AWS), 900 MHz</p> <p>All Nexus One GSM phones: HSDPA 7.2Mbps HSUPA 2Mbps GSM/EDGE 850, 900, 1800, 1900 MHz Wi-Fi 802.11b/g Bluetooth 2.1 + EDR A2DP stereo Bluetooth</p>
Cellular & wireless	<p>Nexus One GSM phones compatible with 3G mobile networks from AT&T (U.S.) and Rogers Wireless (Canada): 3G UMTS bands I/II/V: 2100, 1900, 850 MHz</p> <p>Nexus One GSM phones compatible with 3G mobile networks from T-Mobile (U.S.): 3G UMTS bands I/IV/VIII: 2100, 1700(AWS), 900 MHz</p> <p>All Nexus One GSM phones: HSDPA 7.2Mbps HSUPA 2Mbps GSM/EDGE 850, 900, 1800, 1900 MHz Wi-Fi 802.11b/g Bluetooth 2.1 + EDR A2DP stereo Bluetooth</p>		

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'773 Claims	Android Device with One or More Apps
	<p>SAMSUNG_PRIORART0000379 (Latedroid) ("JuiceDefender saves battery power (lots of it!) by controlling the device data connection and/or WiFi ... You can schedule regular APN/WiFi activation to let background data sync occur and have APN/WiFi enabled while the screen is on. It also helps in minimizing distractions.").</p> <p>SAMSUNG_PRIORART0000351 (Configuration-Translated) ("APN: activates / deactivates the APN connection, in its submenu we find the MMS button that activated configures the reception of MMS in the same way that we have the APN and Prefer Wifi that activated will try to connect first to this and if to five seconds does not find an available network will activate the APN. WIFI: activates / deactivates the WIFI connection, in its submenu we find the following buttons, Auto Disable turns off the wifi in the case of not finding a network available to save battery, in case it is deactivated we will have to activate it manually; Enable on Schedule / Peak / Screen will activate the wifi as we have configured those buttons that we will see below.").</p> <p>SAMSUNG_PRIORART0000361 (Purdy) ("Android: Most phones don't make it easy to switch cellular data connection on and off, even if doing so really helps save your battery. JuiceDefender toggles wireless data and Wi-Fi on and off every so often to preserve power.").</p> <p>SAMSUNG_PRIORART0000335 (Ruddock) ("Juice Defender is a battery conservation app. It uses various triggers, rules, and timers to control how often your device utilizes 3G/EDGE APN's (data connections) as well as WiFi. These data connections are the number one drainers of battery life when your phone is idle, so Juice Defender allows you to decide when, where, and how often you want them to be active.").</p> <p><u>GreenPower App</u></p> <p>POUZERATE0000196 (GreenPower User Guide) ("Manage Mobile Network If this setting is selected, then Green Power will regularly turn on and off the Mobile Network connection, based on the durations specified in the settings below.</p>

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'773 Claims	Android Device with One or More Apps		
	<p>If this setting is not selected, then Green Power will leave the Mobile Network as it is, never turning it on or off.</p> <p>Please note that in order for Green Power to turn on / off Mobile Network, this one has to be manually enabled by the user first in the phone settings (Wireless & networks → Mobile Network) or in Green Power settings (Global wireless settings → Mobile Network) . Green Power can't itself turn on Mobile Network as this is a limitation of the Android system for security and cost reasons.”).</p>		
<p>[1c] a non-transitory computer-readable storage medium storing instructions that, when provided to the processor, cause the processor to</p>	<p>Android Device and One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p>Android devices, such as the Nexus One, include memory to store instructions provided by mobile apps.</p> <p><i>See, e.g., SAMSUNG_PRIORART0000001 (Nexus) at 331:</i></p> <table border="1"> <tr> <td>Storage</td><td> Flash memory: 512MB RAM: 512MB microSD card: 4GB microSD card included (expandable to 32GB) </td></tr> </table>	Storage	Flash memory: 512MB RAM: 512MB microSD card: 4GB microSD card included (expandable to 32GB)
Storage	Flash memory: 512MB RAM: 512MB microSD card: 4GB microSD card included (expandable to 32GB)		
<p>[1d] receive respective requests from a plurality of applications on the device to access the WWAN for background network service</p>	<p>Android Device and One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g., SAMSUNG_PRIORART0000001 (Nexus) at 320:</i></p>		

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'773 Claims	Android Device with One or More Apps
usage activities associated with the respective applications,	<p>Accounts & sync settings screen</p> <p>Background data Check to permit applications to synchronize data in the background, whether or not you are actively working in them. Unchecking this setting can save battery power and lowers (but does not eliminate) data use.</p> <p>Auto-sync Check to permit applications to synchronize data on their own schedule. If you uncheck this setting, you must touch an account in the list on this screen, press Menu ☰, and touch Sync now to synchronize data for that account. Synchronizing data automatically is disabled if Background data is unchecked. In that case, the Auto-sync checkbox is dimmed.</p> <p>SAMSUNG_PRIORART0000001 (Nexus) at 115-116 (“You can configure background data use and synchronization options for all of the applications on your phone. You can also configure what kinds of data you synchronize for each account. Some applications, such as Gmail and Calendar, have their own synchronization settings.”).</p> <p>SAMSUNG_PRIORART0000001 (Nexus) at 115-116:</p>

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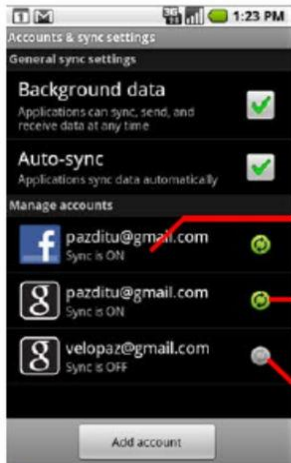


'773 Claims	Android Device with One or More Apps
	<p>The screen displays your current sync settings and a list of your current accounts.</p>  <p>Touch the account to configure.</p> <p>Some or all information from this account is configured to sync automatically with your phone.</p> <p>No information from this account syncs automatically with your phone.</p> <p> indicates that some or all of an account's information is configured to sync automatically with your phone.</p> <p> indicates that none of an account's information is configured to sync automatically with your phone.</p> <p>SAMSUNG_PRIORART0000001 (Nexus) at 318:</p>

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
'773 Claims	Android Device with One or More Apps
	<p>Manage applications Opens a list of all the applications and other software installed on your phone, along with their sizes. By default, only downloaded applications are shown, and they are sorted in alphabetical order. Press Menu  and touch Filter to change the list to show all applications, only running applications, or only downloaded applications. Press Menu  and touch Sort by size to display applications in order by size. Touch an application to open its Application Info screen. See "Application Info screen" on page 318.</p> <p>Running services Opens a list of services—applications or parts of applications that provide services to other applications or that run even when their main application isn't running. Examples include the Android onscreen keyboard and the small portion of Google Talk that always listens for incoming messages. Above each service, one or more gray bars show what processes the running service needs and how much memory it's using (how much memory you would recover if you stopped the service). Depending on the service, when you touch it in the list it either opens a dialog in which you can stop it or opens its Settings screen.</p>
[1e] based at least in part on a current WWAN network busy state, select a corresponding current service usage control policy for the background network service usage activities,	<p>Android Device and One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><u>Nexus One</u></p> <p><i>See, e.g., SAMSUNG_PRIORART0000001 (Nexus) at 320:</i></p>

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'773 Claims	Android Device with One or More Apps
	<p>Accounts & sync settings screen</p> <p>Background data Check to permit applications to synchronize data in the background, whether or not you are actively working in them. Unchecking this setting can save battery power and lowers (but does not eliminate) data use.</p> <p>Auto-sync Check to permit applications to synchronize data on their own schedule. If you uncheck this setting, you must touch an account in the list on this screen, press Menu ☰, and touch Sync now to synchronize data for that account. Synchronizing data automatically is disabled if Background data is unchecked. In that case, the Auto-sync checkbox is dimmed.</p> <p>SAMSUNG_PRIORART0000001 (Nexus) at 115-116 (“You can configure background data use and synchronization options for all of the applications on your phone. You can also configure what kinds of data you synchronize for each account. Some applications, such as Gmail and Calendar, have their own synchronization settings.”).</p> <p>SAMSUNG_PRIORART0000001 (Nexus) at 115-116:</p>

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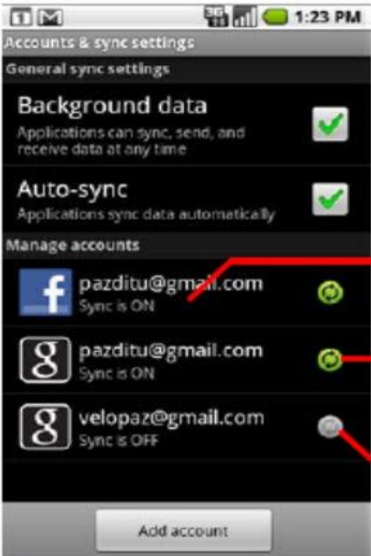


'773 Claims	Android Device with One or More Apps
	<p>The screen displays your current sync settings and a list of your current accounts.</p>  <p>Touch the account to configure.</p> <p>Some or all information from this account is configured to sync automatically with your phone.</p> <p>No information from this account syncs automatically with your phone.</p> <p> indicates that some or all of an account's information is configured to sync automatically with your phone.</p> <p> indicates that none of an account's information is configured to sync automatically with your phone.</p> <p><u>JuiceDefender App</u></p> <p>SAMSUNG_PRIORART0000379 (Latedroid):</p>

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'773 Claims	Android Device with One or More Apps
	<div> <h2>JuiceDefender</h2> </div> <div> </div> <div> <p>JuiceDefender saves battery power (<i>lots of it!</i>) by controlling the device data connection and/or WiFi.</p> </div> <div> <p>You can schedule regular APN/WiFi activation to let background data sync occur and have APN/WiFi enabled while the screen is on. It also helps in minimizing distractions ;)</p> </div> <div> </div> <div> <p>The <i>Easy Mode</i> is a no-fuss one-click way to let your battery last longer - much longer. Just enable JuiceDefender by clicking on the big button and you're ready to go!</p> </div> <div> <p>If you want more fine-grained control, try <i>Advanced Mode</i>, where you can configure all</p> </div> <div> <p>JuiceDefender features to your liking.</p> </div>

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'773 Claims	Android Device with One or More Apps
	<p>There are 5 <i>triggers</i> for the enable/disable behaviour:</p> <p>Battery - when battery level gets low (less than 15%), disable APN/WiFi, and re-enable them when battery level is restored. APN/WiFi will also be enabled while the device is being recharged.</p> <p>Schedule - regularly enable APN/WiFi for a short period of time, to <i>let background data sync</i> occur (email, Twitter, Facebook, stock quotes...). If <i>Quick</i> is disabled APN/WiFi stays enabled for a longer period, useful if your data connection is very slow or you need to sync lots of data.</p> <p>Night schedule (requires <i>UltimateJuice</i>) - disable APN/WiFi during night time; you can also optionally put the phone in Silent Mode.</p> <p>Screen - enable APN/WiFi <i>while the screen is on</i> to allow browsing, tweeting, procrastination and general internet-powered enjoyment, regardless of scheduled events and battery level.</p> <p>Location (requires <i>UltimateJuice</i>) - this trigger controlled by the <i>'AutoWiFi'</i> button. It disables WiFi when the device is not in range of any known WiFi network. The location is determined via the cellular network, so it's usually quite coarse. It's a fully automatic set-it-and-forget-it WiFi manager!</p> <p>The <i>priority order</i> of the triggers is 1) location (WiFi only), 2) screen, 3) battery, 4) night schedule, 5) schedule - this means, for example, that when the screen is on APN/WiFi will be enabled even when the battery is low, or that the regular schedule won't occur during the night period.</p> <p>SAMSUNG_PRIORART0000379 (Latedroid):</p>

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'773 Claims	Android Device with One or More Apps
	 <p>SAMSUNG_PRIORART0000361 (Purdy):</p>

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'773 Claims	Android Device with One or More Apps
	<div> </div> <p>SAMSUNG_PRIORART0000351 (Configuration-Translated):</p>

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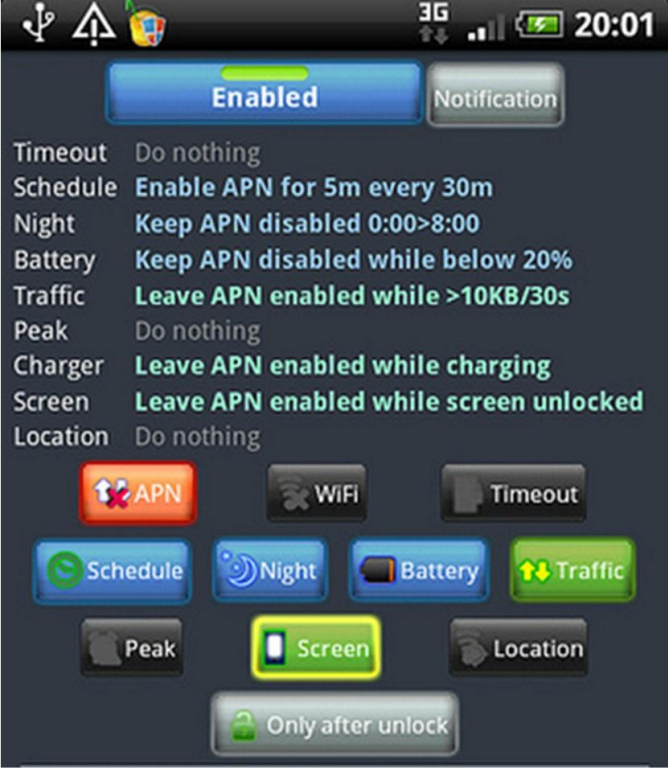
'773 Claims	Android Device with One or More Apps
	 <p>SAMSUNG_PRIORART0000335 (Ruddock):</p>

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'773 Claims	Android Device with One or More Apps
	<div> <p>The screenshot shows the GreenPower App interface. At the top, there's a status bar with the time 9:26 PM and icons for signal, battery, and notifications. Below the status bar, there's a blue button labeled 'Enabled' and a grey button labeled 'Notification'. The main content area lists various settings: Timeout (Do nothing), CPU (Do nothing), Schedule (Enable Data/WiFi for 1m every 15m), Night (Keep Data/WiFi disabled 1am>7am), Battery (Keep Data/WiFi disabled while below 15%), Traffic (Leave Data/WiFi enabled while >10KB/30s), Peak (Do nothing), Charger (Leave Data/WiFi enabled while charging), Screen (Leave Data/WiFi enabled while screen unlo), and Location (Do nothing). Below these settings, there are several buttons: Data, 3G, WiFi, Timeout, CPU, Schedule, Night, Battery, Traffic, Peak, Screen, and Location. At the bottom, there's a 'Prefer WiFi' button.</p> </div> <p><u>GreenPower App</u></p> <p>POUZERATE0000196 (GreenPower User Guide) ("Manage Wifi")</p>

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'773 Claims	Android Device with One or More Apps
	<p>If this setting is selected, then Green Power will regularly turn on and off the Wifi connection, based on the durations specified in the settings below.</p> <p>If this setting is not selected, then Green Power will leave the Wifi as it is, never turning it on or off.</p> <p>Please note that if you manually switches off the Wifi, then Green Power will unselect the “Manage Wifi” setting in order not to automatically switch on the Wifi again despite your manual action. Then, if you switch back on the Wifi or reselect “Manage Wifi” setting, Green Power will resume managing Wifi connection.</p> <p>Manage Mobile Network If this setting is selected, then Green Power will regularly turn on and off the Mobile Network connection, based on the durations specified in the settings below.</p> <p>If this setting is not selected, then Green Power will leave the Mobile Network as it is, never turning it on or off.</p> <p>Please note that in order for Green Power to turn on / off Mobile Network, this one has to be manually enabled by the user first in the phone settings (Wireless & networks → Mobile Network) or in Green Power settings (Global wireless settings → Mobile Network) . Green Power can't itself turn on Mobile Network as this is a limitation of the Android system for security and cost reasons.”).</p>
[1f] determine respective deferred time slots for each of the background network service usage activities based on the current service usage control policy, wherein at least	<p>Android Device and One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><u>Nexus One</u></p> <p>See, e.g., SAMSUNG_PRIORART0000001 (Nexus) at 320:</p>

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'773 Claims	Android Device with One or More Apps
<p>one such service usage control policy specifies that during a time when the current WWAN network busy state indicates network congestion, a selected subset of the background network service usage activities are deferred until network congestion is no longer indicated, and</p>	<p>Accounts & sync settings screen</p> <p>Background data Check to permit applications to synchronize data in the background, whether or not you are actively working in them. Unchecking this setting can save battery power and lowers (but does not eliminate) data use.</p> <p>Auto-sync Check to permit applications to synchronize data on their own schedule. If you uncheck this setting, you must touch an account in the list on this screen, press Menu ☰, and touch Sync now to synchronize data for that account. Synchronizing data automatically is disabled if Background data is unchecked. In that case, the Auto-sync checkbox is dimmed.</p> <p>SAMSUNG_PRIORART0000001 (Nexus) at 115-116 (“You can configure background data use and synchronization options for all of the applications on your phone. You can also configure what kinds of data you synchronize for each account. Some applications, such as Gmail and Calendar, have their own synchronization settings.”).</p> <p><u>JuiceDefender App</u></p> <p>SAMSUNG_PRIORART0000379 (Latedroid):</p>

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'773 Claims	Android Device with One or More Apps
	<div> <h1>JuiceDefender</h1> </div> <div>  </div> <div> <p>JuiceDefender saves battery power (<i>lots of it!</i>) by controlling the device data connection and/or WiFi.</p> </div> <div> <p>You can schedule regular APN/WiFi activation to let background data sync occur and have APN/WiFi enabled while the screen is on. It also helps in minimizing distractions ;)</p> </div> <div>  </div> <div> <p>The <i>Easy Mode</i> is a no-fuss one-click way to let your battery last longer - much longer. Just enable JuiceDefender by clicking on the big button and you're ready to go!</p> </div> <div> <p>If you want more fine-grained control, try <i>Advanced Mode</i>, where you can configure all</p> </div> <div> <p>JuiceDefender features to your liking.</p> </div>

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'773 Claims	Android Device with One or More Apps
	<p>There are 5 <i>triggers</i> for the enable/disable behaviour:</p> <p>Battery - when battery level gets low (less than 15%), disable APN/WiFi, and re-enable them when battery level is restored. APN/WiFi will also be enabled while the device is being recharged.</p> <p>Schedule - regularly enable APN/WiFi for a short period of time, to <i>let background data sync</i> occur (email, Twitter, Facebook, stock quotes...). If <i>Quick</i> is disabled APN/WiFi stays enabled for a longer period, useful if your data connection is very slow or you need to sync lots of data.</p> <p>Night schedule (requires <i>UltimateJuice</i>) - disable APN/WiFi during night time; you can also optionally put the phone in Silent Mode.</p> <p>Screen - enable APN/WiFi <i>while the screen is on</i> to allow browsing, tweeting, procrastination and general internet-powered enjoyment, regardless of scheduled events and battery level.</p> <p>Location (requires <i>UltimateJuice</i>) - this trigger controlled by the <i>'AutoWiFi'</i> button. It disables WiFi when the device is not in range of any known WiFi network. The location is determined via the cellular network, so it's usually quite coarse. It's a fully automatic set-it-and-forget-it WiFi manager!</p> <p>The <i>priority order</i> of the triggers is 1) location (WiFi only), 2) screen, 3) battery, 4) night schedule, 5) schedule - this means, for example, that when the screen is on APN/WiFi will be enabled even when the battery is low, or that the regular schedule won't occur during the night period.</p> <p>SAMSUNG_PRIORART0000361 (Purdy):</p>

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'773 Claims	Android Device with One or More Apps
	<div> </div> <p>Android: Most phones don't make it easy to switch cellular data connection on and off, even if doing so really helps save your battery. JuiceDefender toggles wireless data and Wi-Fi on and off every so often to preserve power.</p> <p>The whole point of a smartphone with Google apps baked in is constant connectivity, of course, and you don't want to shut off access to your email, Google Voice messages, and other online services. But when you're walking around, at your office desk, and generally not actively using your phone, you probably don't need your phone to check in every minute with the mothership. JuiceDefender lets you set a time interval—5 minutes, 15, 30, an hour, two hours—at which its background process will re-enable your carrier APN, see if there are new messages or data coming in, and then shut off again. You can also set similar Wi-Fi connectivity rules, or only have web data enabled when you've got your screen on. Besides the battery savings,</p> <p>those who like to parse out their email checks and avoid minute-by-minute distractions see some benefit here, too.</p> <p><i>See, e.g., SAMSUNG_PRIORART0000351 (Configuration-Translated):</i></p> <div> <p>Schedule Enable APN for 5m every 30m</p> </div> <p>“• Schedule: used to configure how often Juice Defender will activate the APN / WIFI to synchronize emails, social networks, etc .., we select the interval in the bar of your submenu for example 5 minutes every half hour also has the Quick button to minimize the connection time for</p>

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'773 Claims	Android Device with One or More Apps
	<p>the previous example would be 2 minutes every half hour, I recommend not using this option if the selected time period is too short, it may not give you time to connect.”</p> <p><i>See, e.g.,</i> SAMSUNG_PRIORART0000361 (Purdy):</p> <div> <p>Schedule Enable APN+MMS 2m every 15m</p> </div> <p>“JuiceDefender lets you set a time interval—5 minutes, 15, 30, an hour, two hours— at which its background process will re-enable your carrier APN, see if there are new messages or data coming in, and then shut off again.”</p> <p><i>See, e.g.,</i> SAMSUNG_PRIORART0000335 (Ruddock):</p> <div> <p>Schedule Enable Data/WiFi for 1m every 15m</p> </div> <p><u>GreenPower App</u></p> <p>POUZERATE0000196 (GreenPower User Guide) (“Manage Wifi</p> <p>If this setting is selected, then Green Power will regularly turn on and off the Wifi connection, based on the durations specified in the settings below.</p> <p>If this setting is not selected, then Green Power will leave the Wifi as it is, never turning it on or off.</p> <p>Please note that if you manually switches off the Wifi, then Green Power will unselect the “Manage Wifi” setting in order not to automatically switch on the Wifi again despite your manual action. Then, if you switch back on the Wifi or reselect “Manage Wifi” setting, Green Power will resume managing Wifi connection.</p>

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'773 Claims	Android Device with One or More Apps
	<p>Manage Mobile Network If this setting is selected, then Green Power will regularly turn on and off the Mobile Network connection, based on the durations specified in the settings below.</p> <p>If this setting is not selected, then Green Power will leave the Mobile Network as it is, never turning it on or off.</p> <p>Please note that in order for Green Power to turn on / off Mobile Network, this one has to be manually enabled by the user first in the phone settings (Wireless & networks → Mobile Network) or in Green Power settings (Global wireless settings → Mobile Network) . Green Power can't itself turn on Mobile Network as this is a limitation of the Android system for security and cost reasons.”).</p>
<p>[1g] allow each of the background network service usage activities to access the WWAN during the respective deferred time slot for that background network service usage activity.</p>	<p>Android Device and One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><u>Nexus One</u></p> <p><i>See, e.g., SAMSUNG_PRIORART0000001 (Nexus) at 320:</i></p>

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'773 Claims	Android Device with One or More Apps
	<p>Accounts & sync settings screen</p> <p>Background data Check to permit applications to synchronize data in the background, whether or not you are actively working in them. Unchecking this setting can save battery power and lowers (but does not eliminate) data use.</p> <p>Auto-sync Check to permit applications to synchronize data on their own schedule. If you uncheck this setting, you must touch an account in the list on this screen, press Menu ☰, and touch Sync now to synchronize data for that account. Synchronizing data automatically is disabled if Background data is unchecked. In that case, the Auto-sync checkbox is dimmed.</p> <p>SAMSUNG_PRIORART0000001 (Nexus) at 115-116 (“You can configure background data use and synchronization options for all of the applications on your phone. You can also configure what kinds of data you synchronize for each account. Some applications, such as Gmail and Calendar, have their own synchronization settings.”).</p> <p><u>JuiceDefender App</u></p> <p>SAMSUNG_PRIORART0000379 (Latedroid):</p>

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'773 Claims	Android Device with One or More Apps
	<div> <h2>JuiceDefender</h2> </div> <div> </div> <div> <p>JuiceDefender saves battery power (<i>lots of it!</i>) by controlling the device data connection and/or WiFi.</p> </div> <div> <p>You can schedule regular APN/WiFi activation to let background data sync occur and have APN/WiFi enabled while the screen is on. It also helps in minimizing distractions ;)</p> </div> <div> </div> <div> <p>The <i>Easy Mode</i> is a no-fuss one-click way to let your battery last longer - much longer. Just enable JuiceDefender by clicking on the big button and you're ready to go!</p> </div> <div> <p>If you want more fine-grained control, try <i>Advanced Mode</i>, where you can configure all</p> </div> <div> <p>JuiceDefender features to your liking.</p> </div>

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'773 Claims	Android Device with One or More Apps
	<p>There are 5 <i>triggers</i> for the enable/disable behaviour:</p> <p>Battery - when battery level gets low (less than 15%), disable APN/WiFi, and re-enable them when battery level is restored. APN/WiFi will also be enabled while the device is being recharged.</p> <p>Schedule - regularly enable APN/WiFi for a short period of time, to <i>let background data sync</i> occur (email, Twitter, Facebook, stock quotes...). If <i>Quick</i> is disabled APN/WiFi stays enabled for a longer period, useful if your data connection is very slow or you need to sync lots of data.</p> <p>Night schedule (requires <i>UltimateJuice</i>) - disable APN/WiFi during night time; you can also optionally put the phone in Silent Mode.</p> <p>Screen - enable APN/WiFi <i>while the screen is on</i> to allow browsing, tweeting, procrastination and general internet-powered enjoyment, regardless of scheduled events and battery level.</p> <p>Location (requires <i>UltimateJuice</i>) - this trigger controlled by the <i>'AutoWiFi'</i> button. It disables WiFi when the device is not in range of any known WiFi network. The location is determined via the cellular network, so it's usually quite coarse. It's a fully automatic set-it-and-forget-it WiFi manager!</p> <p>The <i>priority order</i> of the triggers is 1) location (WiFi only), 2) screen, 3) battery, 4) night schedule, 5) schedule - this means, for example, that when the screen is on APN/WiFi will be enabled even when the battery is low, or that the regular schedule won't occur during the night period.</p> <p>SAMSUNG_PRIORART0000361 (Purdy):</p>

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'773 Claims	Android Device with One or More Apps
	<div> </div> <p>Android: Most phones don't make it easy to switch cellular data connection on and off, even if doing so really helps save your battery. JuiceDefender toggles wireless data and Wi-Fi on and off every so often to preserve power.</p> <p>The whole point of a smartphone with Google apps baked in is constant connectivity, of course, and you don't want to shut off access to your email, Google Voice messages, and other online services. But when you're walking around, at your office desk, and generally not actively using your phone, you probably don't need your phone to check in every minute with the mothership. JuiceDefender lets you set a time interval—5 minutes, 15, 30, an hour, two hours—at which its background process will re-enable your carrier APN, see if there are new messages or data coming in, and then shut off again. You can also set similar Wi-Fi connectivity rules, or only have web data enabled when you've got your screen on. Besides the battery savings,</p> <p>those who like to parse out their email checks and avoid minute-by-minute distractions see some benefit here, too.</p> <p><i>See, e.g., SAMSUNG_PRIORART0000351 (Configuration-Translated):</i></p> <div> <p>Schedule Enable APN for 5m every 30m</p> </div> <p>“• Schedule: used to configure how often Juice Defender will activate the APN / WIFI to synchronize emails, social networks, etc .., we select the interval in the bar of your submenu for example 5 minutes every half hour also has the Quick button to minimize the connection time for</p>

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'773 Claims	Android Device with One or More Apps
	<p>the previous example would be 2 minutes every half hour, I recommend not using this option if the selected time period is too short, it may not give you time to connect.”</p> <p><i>See, e.g.,</i> SAMSUNG_PRIORART0000361 (Purdy):</p> <div> <p>Schedule Enable APN+MMS 2m every 15m</p> </div> <p>“JuiceDefender lets you set a time interval—5 minutes, 15, 30, an hour, two hours— at which its background process will re-enable your carrier APN, see if there are new messages or data coming in, and then shut off again.”</p> <p><i>See, e.g.,</i> SAMSUNG_PRIORART0000335 (Ruddock):</p> <div> <p>Schedule Enable Data/WiFi for 1m every 15m</p> </div> <p><u>GreenPower App</u></p> <p>POUZERATE0000196 (GreenPower User Guide) (“Manage Wifi</p> <p>If this setting is selected, then Green Power will regularly turn on and off the Wifi connection, based on the durations specified in the settings below.</p> <p>If this setting is not selected, then Green Power will leave the Wifi as it is, never turning it on or off.</p> <p>Please note that if you manually switches off the Wifi, then Green Power will unselect the “Manage Wifi” setting in order not to automatically switch on the Wifi again despite your manual action. Then, if you switch back on the Wifi or reselect “Manage Wifi” setting, Green Power will resume managing Wifi connection.</p> <p>Manage Mobile Network</p>

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'773 Claims	Android Device with One or More Apps
	<p>If this setting is selected, then Green Power will regularly turn on and off the Mobile Network connection, based on the durations specified in the settings below.</p> <p>If this setting is not selected, then Green Power will leave the Mobile Network as it is, never turning it on or off.</p> <p>Please note that in order for Green Power to turn on / off Mobile Network, this one has to be manually enabled by the user first in the phone settings (Wireless & networks → Mobile Network) or in Green Power settings (Global wireless settings → Mobile Network) . Green Power can't itself turn on Mobile Network as this is a limitation of the Android system for security and cost reasons.”).</p>
<p>[2] The wireless end-user device of claim 1, wherein the instructions provided to the processor further cause the processor to classify the respective requests with respective priorities, and the at least one such service usage control policy determines the selected subset of the background network service usage activities based on the respective priorities of the respective requests.</p>	<p>Android Device and One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g., SAMSUNG_PRIORART0000001 (Nexus) at 320:</i></p> <p>Accounts & sync settings screen</p> <p>Background data Check to permit applications to synchronize data in the background, whether or not you are actively working in them. Unchecking this setting can save battery power and lowers (but does not eliminate) data use.</p> <p>Auto-sync Check to permit applications to synchronize data on their own schedule. If you uncheck this setting, you must touch an account in the list on this screen, press Menu , and touch Sync now to synchronize data for that account. Synchronizing data automatically is disabled if Background data is unchecked. In that case, the Auto-sync checkbox is dimmed.</p>

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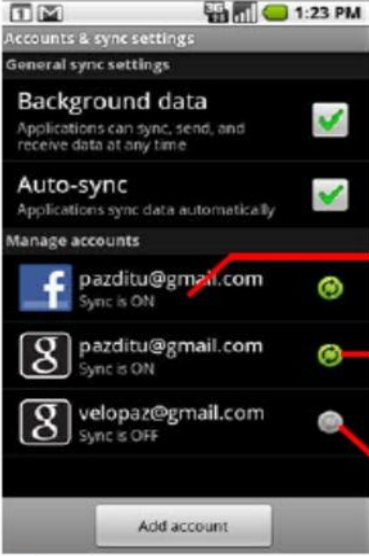


'773 Claims	Android Device with One or More Apps
	<p>SAMSUNG_PRIORART0000001 (Nexus) at 115-116 (“You can configure background data use and synchronization options for all of the applications on your phone. You can also configure what kinds of data you synchronize for each account. Some applications, such as Gmail and Calendar, have their own synchronization settings.”).</p> <p>SAMSUNG_PRIORART0000001 (Nexus) at 115-116: The screen displays your current sync settings and a list of your current accounts.</p>  <p>Touch the account to configure.</p> <p>Some or all information from this account is configured to sync automatically with your phone.</p> <p>No information from this account syncs automatically with your phone.</p> <p> indicates that some or all of an account's information is configured to sync automatically with your phone.</p> <p> indicates that none of an account's information is configured to sync automatically with your phone.</p> <p>See, e.g., the disclosures identified for claims [1d]-[1g].</p>

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<p>[3] The wireless end-user device of claim 2, wherein to classify the respective requests with respective priorities comprises maintaining a network capacity-controlled services list indicating one or more applications having a network capacity control, and assigning a respective priority to a request based on the network capacity-controlled services list.</p>	<p>Android Device and One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g.</i>, the disclosures identified for claims [1d]-[1g].</p>
<p>[4] The wireless end-user device of claim 3, wherein the network capacity-controlled services list is based at least in part on user preference selections.</p>	<p>Android Device and One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g.</i>, the disclosures identified for claims [1d]-[1g], 2, and 3.</p>
<p>[5] The wireless end-user device of claim 1, wherein to allow each of the background network service usage activities to access the WWAN during the respective deferred time slot comprises</p>	<p>Android Device and One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g.</i>, the disclosures identified for claims [1d]-[1g].</p>

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blocking or delaying execution of the application associated with a given background network service usage activity until the respective deferred time slot is reached.	
[6] The wireless end-user device of claim 1, wherein to allow each of the background network service usage activities to access the WWAN during the respective deferred time slot comprises informing an application associated with a given background network service activity when the WWAN is available for that activity.	<p>Android Device and One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g.,</i> the disclosures identified for claims [1d]-[1g].</p>
[7] The wireless end-user device of claim 1, wherein the instructions provided to the processor further cause the processor to, based on at least one selected current service usage policy, defer at least one of the background network service usage activities until a	<p>Android Device and One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g.,</i> the disclosures identified for claims [1d]-[1g].</p>

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different network, other than the WWAN, is available to communicate data for that at least one of the background network service usage activities.	
[8] The wireless end-user device of claim 7, wherein the different network comprises a specific network selection for that at least one of the background network service usage activities.	<p>Android Device and One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g.,</i> the disclosures identified for claims [1d]-[1g] and 7.</p>
[9] The wireless end-user device of claim 1, wherein the instructions provided to the processor further cause the processor to select different service usage control policies based at least in part on, in addition to the current WWAN network busy state, monitoring of user interaction with the device.	<p>Android Device and One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g.,</i> the disclosures identified for claims [1d]-[1g].</p>
[10] The wireless end-user device of claim 1, wherein the instructions provided to the	<p>Android Device and One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p>

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processor further cause the processor to select different service usage control policies based at least in part on, in addition to the current WWAN network busy state, a power state.	<i>See, e.g.</i> , the disclosures identified for claims [1d]-[1g].
[11] The wireless end-user device of claim 1, wherein to receive respective requests from a plurality of applications comprises receiving the requests through an operating system device service access Application Programming Interface (API), the API allowing applications to request a time slot demand for a background network service usage activity.	Android Device and One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures: <i>See, e.g.</i> , the disclosures identified for claims [1d]-[1g].
[12] The wireless end-user device of claim 1, wherein to receive respective requests from a plurality of applications comprises receiving the requests through an operating system device service access Application	Android Device and One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures: <i>See, e.g.</i> , the disclosures identified for claims [1d]-[1g] and 11.

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Programming Interface (API), the API allowing applications to indicate a data size for a background network service usage activity.	
[13] The wireless end-user device of claim 1, wherein the current network busy state is received from a network element via the WWAN.	<p>Android Device and One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g.,</i> the disclosures identified for claims [1d]-[1g].</p>
[14] The wireless end-user device of claim 1, wherein the instructions provided to the processor further cause the processor to generate the current network busy state.	<p>Android Device and One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g.,</i> the disclosures identified for claims [1d]-[1g].</p>
[16] The wireless end-user device of claim 1, wherein the instructions provided to the processor further cause the processor to apply the current service usage control policy for one or more of the background network service activities based on a service usage behavior analysis of the activity.	<p>Android Device and One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g.,</i> the disclosures identified for claims [1d]-[1g].</p>

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<p>[17] The wireless end-user device of claim 1, wherein the instructions provided to the processor further cause the processor to apply the current service usage control policy for one or more of the background network service activities based on monitoring power consumption behavior of the activity.</p>	<p>Android Device and One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g.,</i> the disclosures identified for claims [1d]-[1g] and 10.</p>
<p>[18] The wireless end-user device of claim 1, wherein the instructions provided to the processor further cause the processor to apply the current service usage control policy for one or more of the background network service activities based on monitoring user interaction with the activity.</p>	<p>Android Device and One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g.,</i> the disclosures identified for claims [1d]-[1g].</p>
<p>[19] The wireless end-user device of claim 1, the one or more processors further configured to communicate with one or more of the</p>	<p>Android Device and One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g.,</i> the disclosures identified for claims [1d]-[1g].</p>

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'773 Claims	Android Device with One or More Apps
applications through an Application Programming Interface that informs each such application of one or more policies applied to background network service usage activities associated with that application.	
[20] The wireless end-user device of claim 1, wherein to determine respective deferred time slots for each of the background network service usage activities further comprises delaying a time slot for a particular one of the background network service usage activities at least until a first time delay has occurred since a previous deferred time slot associated with that activity.	<p>Android Device and One or More Apps discloses and/or renders obvious this limitation. For example, see the following passages and/or figures, as well as related disclosures:</p> <p><i>See, e.g.,</i> the disclosures identified for claims [1d]-[1g].</p>